Distr.
GENERAL

UNCTAD/COM/75
3 April 1996

ENGLISH ONLY

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

IMPLICATIONS OF THE URUGUAY ROUND FOR TRADE IN WOOD AND WOOD PRODUCTS

Study by the UNCTAD secretariat

GE.96-50912

CONTENTS

		Paragraphs
	Introduction	1 - 2
Chapters		
I.	Trends in production and trade and in protectionism before implementation of the results of the Uruguay Round	3 - 25
	A. Trends in production and trade	3 - 16
	B. Main problems of trade for developing countries	17 - 23
	C. Main developments with regard to post-Tokyo Round protection policies	24 - 25
II.	Results of the Uruguay Round	26 - 76
	A. Improvement of market access	26 - 40
	1. Tariff concessions	26 - 37
	2. Non-tariff barriers	38 - 40
	B. Trade-related environmental measures (TREMs)	41 - 76
	1. TREMS and multilateral environmental agreements (MEAs)	46 - 54
	2. Trade and the environment in the Uruguay Round Agreements	55 - 76
	(a) Provisions of GATT 1994 and the Uruguay Round Agreements on certain disciplines	56 - 65
	(b) GATT and the General Exceptions	66 - 76
III.	Likely impact of the Uruguay Round on trade, prices and use of forests	77 - 84
IV.	Further action	85 - 93
	A. Gaps in the Uruguay Round and further international action on tariffs and non-tariff barriers	85 - 87
	B. Trade-related environmental measures (TREMs)	88 - 90
	C. National-level action for developing countries	91 - 93

		Page
Annex:	Wood and wood products in the Harmonized System	45
	References	49
	Notes	50

TABLES

		Page
1.	Volume of world production and trade in forest products, 1961-1993	5
2.	Value of world imports of forest products, 1961-1993	6
3.	Volume of world and tropical timber, wood pulp and paper production and trade, 1992	7
4.	Value of world and tropical wood products exports, 1992	8
5.	Production and trade in main timber products by tropical country groups, 1992	8
6.	Exports of main timber products as percentages of production in tropical countries, 1961-1992	9
7.	Production and trade of main timber products in major South East Asian tropical-timber-producing countries, 1994	9
8.	Forest product trade balances of developing exporting countries and territories, 1993	11
9.	Exports of main wood products by region, 1993	12
10.	Imports of main wood products by region, 1993	13
11.	Japanese imports of logs, lumber, and plywood, by temperate and tropical, and hardwood and softwood, 1990	14
12.	Importance of tropical timber in the Japanese forest products sector, 1990	14
13.	End uses for tropical lumber and plywood in Japan, 1989	15
14.	United States imports of forest products from tropical countries, 1990	15
15.	End uses for tropical lumber and plywood in North America, 1990	16
16.	End uses for tropical sawn wood and plywood in selected European countries	16
17.	DMEC imports of furniture by origin, 1994	17
18.	Major developing country exporters of furniture and furniture parts	18
19.	United States furniture imports by origin, 1992 and 1993	18
20.	Tropical forest resources: status and changes	20
21.	Tariff commitments of developed economies on wood, pulp, paper and furniture	22
22.	Developed country tariff reductions on wood, pulp, paper and furniture	23
23.	Developed economy tariff profiles for wood, pulp, paper and furniture	25
24.	Change in tariff escalation in selected product categories	26
25.	Changes in tariff escalation on wood and paper products imported by some developed economies from developing economies	27
26.	Uruguay Round tariff reductions on wood, pulp, paper and furniture of current high export interest to individual developing countries	28
27.	Reduction in trade-weighted tariff averages for imports by quad countries in 1988	30
28.	Export taxes and bans on tropical timber, 1989	31
29.	Estimated increase in exports of forestry products due to the implementation of the liberalization of trade in goods, year 2005	41

INTRODUCTION

1. This commodity profile on wood and wood products of interest to developing countries was prepared as a background study, along with similar studies on other commodities, for the fourth session of the UNCTAD Standing Committee on Commodities (30 October - 3 November 1995) and the agenda item entitled, "Analysis of the evolution of prices and trade of commodities to be expected in the light of the results of the Uruguay Round, with particular emphasis on their implications for developing countries, including their diversification efforts".

2. The study first briefly reviews trends in production and trade, the main problems of commodity trade for developing countries and the main developments with respect to protection policies and measures. The second chapter summarizes some results of the Uruguay Round in terms of improvement of market access for wood and wood products and trade-related environmental measures (TREMs). The third chapter draws some implications of these results for trade and prices of wood and wood products. The final chapter suggests some further action which could be taken at the international level and at the country or regional level.

Chapter I

TRENDS IN PRODUCTION AND TRADE AND IN PROTECTIONISM BEFORE IMPLEMENTATION OF THE RESULTS OF THE URUGUAY ROUND

A. Trends in production and trade

3. As seen in table 1, volumes of world production of six major categories of wood and wood products rose from 1961 to 1993. The category of "industrial roundwood" refers to logs which are used to manufacture other products, except fuelwood and charcoal. Table 1 also shows that world imports increased, with the exception of fuelwood and charcoal. World imports expressed as percentages of world production increased, indicating the growing importance of trade as an outlet for production, with the exceptions of wood pulp and fuelwood and charcoal whose shares changed little .

Table 1

Volume of world production and trade in forest products, 1961-1993 (million cubic meters)

	1961	1970	1980	1990	1992	1993
Fuelwood and charcoal						
Production	1041	1186	1480	1795	1855	1876
Imports	4	3	3	4	5	5
Imports as a % of production	0.3	0.2	0.2	0.2	0.3	0.3
Industrial roundwood						
Production	1018	1278	1452	1726	1561	1529
Imports	38	93	118	105	118	106
Imports as a % of production	3.8	7.3	8.1	6.1	7.6	6.9
Sawnwood and sleepers						
Production	346	415	451	505	437	432
Imports	41	56	78	91	95	99
Imports as a % of production	11.8	13.6	17.2	18.0	21.7	22.9
Wood-based panels						
Production	26	70	101	126	129	133
Imports	3	10	16	30	32	34
Imports as a % of production	12.0	14.4	15.5	23.8	24.8	25.6
Wood pulp 1/						
Production	62	102	126	155	153	152
Imports	10	17	21	25	28	29
Imports as a % of production	16.0	16.3	16.4	16.3	18.3	19.1
Paper and paperboards 1/						
Production	77	126	170	240	245	254
Imports	13	23	34	56	61	63
Imports as a % of production	16.5	18.0	19.9	23.3	24.9	24.8

Source: FAO (1993), *Yearbook of Forest Products.*

Wood pulp and paper and paperboards in million metric tonnes (mn mt).

4. The total value of world trade in forest products increased from US$ 6,778 million in 1961 to US$ 106,742 million in 1993, a sixteen-fold increase. Values of world imports of the six categories, given in table 2, increased, but imports, expressed as percentages of the value of world imports of all forest products (AFP), were mixed. The share of imports of industrial roundwood declined as world trade shifted to processed products. The share of wood-based panels rose, as did the share of paper and paperboards. The shares of sawnwood and sleepers, or railroad ties, wood pulp, and fuelwood and charcoal declined.

Table 2

Value of world imports of forest products, 1961-1993
(value in millions of dollars, share in %)

	1961	1970	1980	1990	1991	1992	1993
All forest products (AFP)							
Value	6778	14170	62377	109781	104827	110284	106742
Share	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuelwood + charcoal							
Value	31	29	122	192	168	246	232
Share	0.5	0.2	0.2	0.2	0.2	0.2	0.2
Industrial roundwood							
Value	908	2693	12316	11269	12113	12432	12867
Share	13.4	19.0	19.7	10.3	11.6	11.3	12.1
Sawnwood + sleepers							
Value	1841	3020	13952	20429	19094	21737	22864
Share	27.2	21.3	22.4	18.6	18.2	19.7	21.4
Wood-based panels							
Value	437	1184	5236	11012	10375	11932	13077
Share	6.4	8.4	8.4	10.0	9.9	10.8	12.3
Wood pulp							
Value	1316	2650	9777	17321	14619	14751	12047
Share	19.4	18.7	15.7	15.7	13.9	13.4	11.3
Paper + paperboards							
Value	2244	4567	20845	49349	48252	48893	45431
Share	33.1	32.2	33.4	45.0	46.0	44.3	42.6

Source: FAO (1993), *Yearbook of Forest Products.*

5. Exports of developing countries consist predominantly of tropical timber, a term taken to refer to logs, sawnwood, wood-based panels and veneer of tropical origin. All tropical timber is produced in developing countries. Exports are mostly hardwoods and products made of them. There are, however, some developing countries in temperate regions which export their wood and wood products. World tropical timber exports were US$14.1 billion in 1992, while developing country exports of temperate timber, both hardwoods and softwoods, were only US$ 2.8 billion in that year.

6. Table 3 gives production and exports of tropical timber, wood pulp and paper in volumes and expressed as percentages of world production and exports for the year 1992. Table 4 gives values of world exports and exports of tropical wood products, as well as the percentages that tropical products represent of world exports for each of the categories of wood and wood products. Tropical saw and veneer logs accounted for 34.6 per cent of trade in logs by value. Tropical wood-based panels, largely plywood, represented 43.3 per cent of trade in wood-

based panels by value in 1992. Tropical sawnwood had a share of only 16.2 per cent of trade, as a large trade of temperate sawnwood is from developed countries. Total exports of tropical timber amounted to US$ 14.1 billion, out of total world trade of US$ 104.1 billion in 1992.

Table 3

Volume of world and tropical timber, wood pulp and paper production and trade, 1992

	Production	Exports	Tropical production as a % of world production	Tropical exports as a % of world exports
Total roundwood (mn cum) a/				
World	3416.3	125.7		
Tropical	1681.3	29.3	49.2	23.3
Industrial roundwood (mn cum) b/				
World	1560.9	120.8		
Tropical	288.4	27.6	18.5	22.8
Saw and veneer logs (mn cum) b/				
World	904.0	86.4		
Tropical	191.7	26.7	21.2	30.9
Sawnwood and sleepers (mn cum)				
World	436.5	97.8		
Tropical	73.9	11.1	16.9	11.3
Wood based panels (mn cum)				
World	128.9	32.2		
Tropical	21.8	13.8	16.9	42.9
Wood pulp (mn tonnes) c/				
World	152.9	29.1		
Tropical	8.8	2.0	5.8	6.9
Paper and paperboard (mn tonnes)				
World	244.9	62.5		
Tropical	18.0	3.7	7.3	5.9

Source: FAO (1993), *Yearbook of Forest Products.*

a/ "mn cum" refers to millions of cubic metres.
b/ "Total roundwood" includes "industrial round wood" which includes "saw and veneer logs".
c/ "mn tonnes" refers to millions of metric tonnes.

7. Production and trade in timber products of all tropical countries and by the three major regions and the three major categories for the year 1992 are seen in table 5. Also given is an estimate of apparent domestic consumption (ADC). Exports of timber products, expressed as percentages of production for the years 1961 to 1992, are seen in table 6. Shares of exports in production have fallen in tropical Africa and tropical America as domestic consumption has become relatively larger. For tropical Asia and Oceania, the share of exports in production of logs declined, while the share of exports of sawnwood in production increased. Exports of wood-based panels represented 78.3 per cent of production in 1992, whereas in 1961 the share of exports was 40.5 per cent of the then small industry. The rapid and large development of plywood manufacturing and exports from Indonesia has been the main contributor to this result. A more detailed breakdown of production and trade of Indonesia, Malaysia, Papua New Guinea, the Philippines and Thailand is given in table 7.

Table 4

Value of world and tropical wood product exports, 1992
(Value in billions of dollars, share in per cent)

	Value		Share of tropical wood
	World	Tropical	
Saw and veneer logs	8.07	2.79	34.6
Sawnwood	19.07	3.09	16.2
Wood-based panels	11.44	4.95	43.3
Wood pulp	13.80	0.87	6.3
Paper and paperboard	49.39	2.22	4.5
Others	1.98	0.15	7.6
Total	104.12	14.07	13.5

Source: FAO (1993), *Yearbook of Forest Products.*

Table 5

Production and trade in main timber products by tropical country groups, 1992
(1000 cubic metres)

	Production	Exports	Imports	ADC 1/
All tropical countries				
Industrial roundwood	288,381	27,596	4,644	265,429
Sawnwood	73,857	11,144	10,824	73,537
Wood-based panels	21,769	13,810	3,216	11,175
Tropical Africa				
Industrial roundwood	46,436	3,725	483	43,194
Sawnwood	6,387	1,324	4,264	9,327
Wood-based panels	1,370	290	309	1,389
Tropical America				
Industrial roundwood	102,504	476	213	102,241
Sawnwood	25,665	1,655	1,893	25,903
Wood-based panels	4,139	792	464	3,811
Tropical Asia and Oceania				
Industrial roundwood	139,441	23,395	3,949	119,995
Sawnwood	41,805	8,164	4,667	38,308
Wood-based panels	16,260	12,728	2,444	5,976

Source: FAO (1992), *Yearbook of Forest Products.*

1/ ADC = Apparent Domestic Consumption.

Tropical countries are taken here to be countries with the majority of their land mass lying between the tropics. This table includes data on coniferous and non-coniferous timber products.

Table 6

Exports of main timber products as percentages of production in tropical countries, 1961-1992 (percentages)

	1961	1970	1980	1990	1992
All tropical countries					
Industrial roundwood	15.6	27.1	18.2	9.7	9.6
Sawnwood	15.3	17.3	16.2	13.7	15.1
Wood-based panels	34.0	33.0	32.5	68.3	63.4
Tropical Africa					
Industrial roundwood	23.8	23.3	16.3	8.8	8.0
Sawnwood	32.1	28.5	12.7	19.2	20.7
Wood-based panels	34.0	33.0	28.6	26.2	21.2
Tropical America					
Industrial roundwood	1.6	1.0	0.2	0.2	0.5
Sawnwood	14.7	13.6	6.9	4.3	6.4
Wood-based panels	34.0	33.0	15.3	18.0	19.1
Tropical Asia and Oceania					
Industrial roundwood	22.2	44.2	33.4	17.2	16.8
Sawnwood	11.9	18.5	24.5	18.3	19.5
Wood-based panels	40.5	39.9	49.4	89.1	78.3

Source: FAO (1992), *Yearbook of Forest Products.*

Table 7

Production and trade of main timber products in major South-East Asian tropical-timber-producing countries, 1994 (1000 cubic metres)

	Products	Production	Imports	Exports	ADC a/
Indonesia	Logs	36,000	10	0	36,010
	Sawnwood	8,000	0	300	7,700
	Plywood	10,000	0	9,550	450
	Veneer	60	0	30	30
Malaysia	Logs	36,000	34	9,700	26,334
	Sawnwood	9,000	187	5,050	4,137
	Plywood	3,100	12	2,904	208
	Veneer	2,200	2	576	1,626
Papua New Guinea	Logs	3,500	0	2,900	600
	Sawnwood	160	3	14	149
	Plywood	13	0	0	13
	Veneer	0	0	0	0
Philippines	Logs	545	625	0	1,170
	Sawnwood	233	912	114	1,031
	Plywood	189	4	18	175
	Veneer	53	5	2	56
Thailand	Logs	20	2,004	0	2,024
	Sawnwood	1,112	2,081	52	3,141
	Plywood	279	36	1	314
	Veneer	72	11	3	80
Total Asia-Pacific producers	Logs	95,617	3,407	12,806	86,218
	Sawnwood	27,955	3,186	5,581	25,560
	Plywood	13,948	412	12,487	1,873
	Veneer	2,389	22	612	1,799

Source: International Tropical Timber Organization, *Annual review and assessment of the world tropical timber situation, 1993-1994.*

a/ ADC = Apparent domestic consumption.

8. The trade balances in all forest products of tropical countries which had exports in 1993 are seen in table 8. Many of these countries recorded large imports and were net importers, as evidenced by negative signs on their net exports.

9. The analysis above has drawn attention to the importance of tropical timber in exports of developing countries. Table 9 gives exports of the categories of main wood products by regions of developing countries for the year 1993. Exports of developing countries, both tropical and temperate, totalled US$ 19.9 billion, with wood-based panels accounting for more than one-third and each of the other categories about one-fifth, except wood pulp at 7.0 per cent of the total. By region of the developing countries, Asia represented 67.4 per cent, Latin America 19.2 per cent and Africa only 7.3 per cent of the total. Figures for developed countries by regions are also given in table 9.

10. Imports for the same product categories and regions as in table 9 are seen in table 10. Imports of all developing countries totalled US$ 21.8 billion in 1993, or 9.5 per cent more than the value of exports of the main wood products of developing countries. Asia was the predominant importing region, with three-fourths of imports of all developing countries.

11. As regards developed countries, imports by region and product category are given in table 10. More detailed information is available for some major importing countries. The structure of Japan's imports of logs, lumber and plywood by temperate and tropical and hardwood and softwood in 1990 is seen in table 11. Japan imports mainly tropical hardwood logs and temperate softwood logs, as well as temperate softwood lumber. It is also an important market for tropical hardwood plywood and lumber, although the figures for these imports in table 11 are relatively small in comparison with other trade flows. As seen in table 12, imported tropical logs are used mainly for plywood, where these logs represented 88 per cent of all logs used for making plywood. End uses for tropical timber and plywood in Japan are seen in table 13. Housing and construction was the leading sector in 1989.

12. United States imports of forest products from tropical countries in 1990 are given in table 14. Pulp and paper, "other solid wood" products, plywood and wooden furniture constituted the bulk of all imports by value, at 91.0 per cent of the total. End uses of tropical lumber and plywood in North America in 1990 are given in table 15. End uses for tropical sawnwood and plywood in the United Kingdom, France and Germany are seen in table 16.

13. As regards trade flows by origin and destination, historically the main routes were African timber shipped to Europe, Latin American timber transported to North America, and South-East Asian timber supplying the Asian market, with some exports to Europe and North America. More recently there has been wider trade with, for example, logs from Africa sent to Asian importing countries.

14. The above discussion has centered on the position of tropical timber, wood pulp and paper in world markets. Turning to further processing, furniture production and exports of developing countries have become a major part of trade in wood products, although furniture exports need not consist entirely of wood material. A breakdown of developed market economy (DMEC) importing countries and their respective sources by region of developing countries for 1994 is given in table 17.

Table 8

Forest product trade balances of developing exporting countries and territories, 1993
(Thousand dollars)

	Imports	Exports	Net Exports
Tropical Africa			
Cameroon	18,450	319,564	301,114
Central African Republic	271	10,208	9,937
Congo	1,080	113,185	112,105
Côte d'Ivoire	26,936	304,051	277,115
Equatorial Guinea	72	33,144	33,072
Gabon	5,660	345,334	339,674
Ghana	10,514	154,222	143,708
Guinea	2,860	2,094	-766
Guinea-Bissau	518	1,211	693
Kenya	15,476	961	-14,515
Liberia	454	3,415	2,961
Madagascar	1,955	2,249	294
Malawi	4,537	10	-4,527
Mozambique	1,255	5,648	4,393
Nigeria	76,502	19,916	-56,586
Sierra Leone	1,268	1,248	-20
United Republic of Tanzania	3,620	3,709	89
Zaire	4,622	49,915	45,293
Zimbabwe	6,022	5,603	-419
Tropical America			
Belize	3,051	1,935	-1,116
Costa Rica	111,408	2,454	-108,954
Cuba	8,635	316	-8,319
El Salvador	45,121	104	-45,017
Guatemala	66,913	3,634	-63,279
Honduras	39,913	29,306	-10,607
Mexico	1,187,089	276,214	-910,875
Nicaragua	6,115	523	-5,592
Panama	67,514	3,658	-63,856
Trinidad and Tobago	53,939	1,174	-52,765
Bolivia	19,863	54,110	34,247
Brazil	308,471	1,994,730	1,686,259
Colombia	182,741	18,480	-164,261
Ecuador	111,531	27,656	-83,875
French Guiana	3,735	1,147	-2,588
Guyana	1,813	5,632	3,819
Paraguay	32,026	61,868	29,842
Peru	104,312	12,194	-92,118
Suriname	2,352	1,491	-861
Tropical Asia & Oceania			
Brunei Darussalam	1,010	73	-937
Cambodia	871	102,143	101,272
Hong Kong	2,218,545	1,044,231	-1,174,314
India	262,381	16,799	-245,582
Indonesia	555,970	5,157,970	4,602,000
Lao, People's Dem. Rep.	740	67,906	67,166
Malaysia	411,173	4,189,778	3,778,605
Myanmar	1,903	294,153	292,250
Philippines	330,312	96,597	-233,715
Singapore	799,049	441,570	-357,479
Sri Lanka	31,446	2,346	-29,100
Thailand	1,378,566	205,371	-1,173,195
Yemen	140,402	1	-40,401
Fiji	8,924	23,501	14,577
Papua-New Guinea	4,597	463,528	458,931
Solomon Islands	321	83,080	82,759
Vanuatu	291	1,839	1,548

Source: FAO (1993), *Yearbook of Forest Products.*

Table 9

Exports of main wood products by region, 1993
(Value in millions of US dollars, quantity in thousands m^3)

		Industrial roundwood	Sawnwood	Wood based panels	Wood pulp 1/	Paper products 1/	Total
World	Quantity	104634	102201	34719	29334	64484	-
	Value	10049	20953	12972	11010	44183	99167
DME Countries	Quantity	60268	79425	17768	23822	57405	-
	Value	5382	15599	5751	9282	40212	76226
North America	Quantity	29995	52966	7257	15331	20042	-
	Value	3332	9979	1842	6001	11423	32577
Europe	Quantity	17217	25339	9747	7442	35088	-
	Value	1112	5300	3649	2880	26688	39629
Oceania	Quantity	11548	1029	624	701	656	-
	Value	780	290	194	204	303	1771
Other DME	Quantity	1508	91	140	348	1619	-
	Value	158	30	66	197	1798	2249
Developing Countries	Quantity	28359	14157	15827	4272	6147	-
	Value	3531	4440	6932	1393	3572	19868
Africa	Quantity	3533	1009	189	132	11	-
	Value	812	430	151	48	9	1450
Latin America	Quantity	7707	3148	1629	3706	1578	-
	Value	451	786	561	1187	835	3820
Asia	Quantity	14315	8948	13848	293	4219	-
	Value	1688	2992	6153	114	2452	13399
W. Asia	Quantity	58	149	60	3	56	-
	Value	5	23	20	1	41	90
S. & S.E. Asia	Quantity	14257	8799	13788	290	4163	-
	Value	1683	2969	6133	113	2411	13309
Other developing countries	Quantity	2795	1052	161	141	339	-
	Value	580	232	67	44	276	1199
Eastern Europe	Quantity	16016	8619	1124	1240	932	-
	Value	1136	914	289	335	399	3073

Source: FAO (1993), *Yearbook of Forest Products.*

1/ 1,000 metric tons.

Table 10

Imports of main wood products by region, 1993
(Values in millions of US dollars, quantities in 1,000 cubic metres)

		Industrial roundwood	Sawnwood	Wood based panels	Wood pulp 1/	Paper products 1/	Total
World	Quantity	106309	98771	33969	29038	63093	-
	Value	12867	22859	13074	12046	45426	106272
DME Countries	Quantity	85100	83642	24089	22650	46746	-
	Value	10107	19398	9345	9615	35132	83597
North America	Quantity	6766	37948	6183	5190	13131	-
	Value	354	5814	1907	2129	8718	18922
Europe	Quantity	33219	33162	12011	13772	30475	-
	Value	2427	8814	4916	5864	23631	45652
Oceania	Quantity	15	1297	206	240	1024	-
	Value	2	357	87	100	942	1488
Other DME	Quantity	45100	11235	5689	3448	2116	-
	Value	7324	4413	2435	1522	1841	17535
Developing Countries	Quantity	20700	14429	9762	6254	15641	-
	Value	2730	3355	3652	2371	9650	21758
Africa	Quantity	459	2621	256	169	1045	-
	Value	56	437	114	64	665	1336
Latin America	Quantity	247	2159	873	1198	3669	-
	Value	22	513	302	463	2291	3591
Asia	Quantity	19804	9335	8495	4705	10628	-
	Value	2640	2332	3167	1773	6408	16320
W. Asia	Quantity	2549	1978	1318	354	1755	-
	Value	276	325	497	156	1109	2363
S. & S.E. Asia	Quantity	17255	7357	7177	4351	8873	-
	Value	2364	2007	2670	1617	5299	13957
Other developing countries	Quantity	190	314	138	182	299	-
	Value	12	73	69	71	286	511
Eastern Europe	Quantity	509	700	118	134	706	-
	Value	30	106	77	60	644	917

Source: FAO (1993), *Yearbook of Forest Products.*

1/ 1,000 metric tons.

Table 11

Japanese imports of logs, lumber, and plywood, by temperate and tropical, and hardwood and softwood, 1990 (1000) cubic metres)

Type	Logs	Lumber	Plywood a/
Tropical	11,527	1,679	2,720
Hardwood	11,300	1,371	2,718
Softwood b/	227	308	2
Temperate	17,472	7,404	332
Hardwood	1,017	343	282 c/
Softwood	16,455	7,061	50
Total	28,999	9,083	3,095 d/
Hardwood	12,317	1,714	3,000
Softwood	16,682	7,369	52

Source: Wood-Products Stockpile Corp. (1991) in: London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests", "Technical annexes to the main report", 25 March 1993, Annex C, "Market Conditions for Tropical Timber Products" by D.J. Brooks.

a/ Converted from square metres at 135 m2 per m3.
b/ Softwood volume from South Seas and "other".
c/ Hardwood plywood not classified as tropical; Indonesia is the primary supplier.
d/ Includes plywood classified as "other".

Table 12

Importance of tropical timber in the Japanese forest products sector, 1990

	Imports of tropical logs			Imports of tropical	
	Total	Used for lumber	Used for plywood	Lumber	Plywood
	Thousand cubic meters				
Volume	11,300	2,614	8,684	1,371 c/	2,718 d/
	Percent				
Share of supply a/	24	5	88	5	26
Share of imports b/	39	11	92	15	88

Source: Calculated and estimated from data reported by Japan Wood-Products Information and Research Center (JAWIC) (1991), Japan Wood-Products Stockpile Corp (WSC) (1991), and Japan Lumber Reports (1992) in: London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests", "Technical annexes to the main report", 25 March 1993, Annex C, "Market Conditions for Tropical Timber Products" by D.J. Brooks.

a/ Tropical share of total log supply (from domestic production and imports), and tropical share of total lumber and plywood supply.
b/ Tropical share of total log, lumber, and plywood imports (including softwood logs).
c/ Includes hardwood lumber from South Seas and a small quantity of hardwood lumber from sources other than the South Seas, North America, Russia, Chile and New Zealand.
d/ Tropical hardwood plywood imports (WSC 1991) converted from square metres (366.9 million m2) at 135 m2 per m3.

Table 13

End uses for tropical lumber and plywood in Japan, 1989
(Share in percentage)

End use	Lumber	Plywood
Housing and construction	37	66
Furniture	29	9
Packaging	13	4
Other	21	21

Source: Ward Associates (1991) in: London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests", "Technical annexes to the main report", 25 March 1993, Annex C, "Market Conditions for Tropical Timber Products" by D.J. Brooks.

Table 14

United States imports of forest products from tropical countries, 1990
(millions of dollars)

	Total	Of which tropical a/
Logs	15.1	4.2
Sawnwood	116.5	82.6
Veneer	53.9	21.6
Plywood	467.3	383.7
Subtotal, primary	652.8	492.1
Other solid wood b/	491.7	na
Pulp and paper	516.2	na
Wooden furniture	396.2	na
Grand total	2056.9	..

Source: London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests", "Technical annexes to the main report", 25 March 1993, Annex C, "Market Conditions for Tropical Timber Products" by D.J. Brooks.

Note: Tropical countries are those countries with significant land area in the tropical zone; figures do not include data for imports from Taiwan Province of China, Singapore, and Hong Kong, but do include data for imports from Mexico.

a/ Commodities identified as tropical timber; the species composition of manufactured products and furniture is not identified in trade data.
b/ Includes milled and manufactured products such as joinery, windows, doors, tools and tableware.

Table 15

End uses for tropical lumber and plywood in North America, 1990
(Share in percentage)

End use	Lumber	Plywood
Housing/construction	15	30
Furniture	35	25
Cabinets	10	15
Millwork	25	10
Containers	1	1
Other	14	19

Source: Ward International (1992) in: London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests", "Technical annexes to the main report", 25 March 1993, Annex C, "Market Conditions for Tropical Timber Products" by D.J. Brooks.

Table 16

End uses for tropical sawn wood and plywood in selected European countries
(Share in percentage)

Product and end use	United Kingdom	France	Germany
Sawn wood			
Joinery	24	39	15
Windows, doors	23	22	67
Furniture	33	25	18
Construction	11	11	..
Other	9	3	..
Plywood			
Shopfitting, joinery	34	33	..
Furniture	17	18	15
Industrial	19	..	66
Construction	19	25	19
Other	11	24	..

Source: Based on data reported by Cooper (1990), in: London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests," "Technical annexes to the main report", 25 March 1993, Annex C, "Market Conditions for Tropical Timber Products" by D.J. Brooks.

15. Furniture exports of developing countries reached a value of US$ 4.0 billion per year in the 1990-1991 period, up from US$ 1.3 billion per year in 1980-1981. A listing of main exporting countries and territories in 1990-1991 is given in table 18. The leading exporter was Taiwan Province of China, with 39.1 per cent of the total for developing countries. Exports from developing countries represented only 13.2 per cent of world trade in furniture in 1990-1991, a low share which points to the scope for expansion of these high value-added products. As seen in table 19, imports of furniture by the United States from all sources in 1993 were valued at US$ 3.0 billion, up 13 per cent from 1992.

Table 17

DMEC imports of furniture by origin, 1994
(US$ millions)

	Origin					
	DMECs	Central/ Eastern Europe	Total developing	America DCs	Africa DCs	Asia DCs
TOTAL DMECs of which:	14,527.4	1,431.1	5,475.5	1,355.9	29.1	3,739.1
Germany	2,589.5	949.6	361.7	51.8	.6	142.6
United States	2,454.5	20.3	3,177.7	1,068.4	9.2	2,044.6
France	1,526.4	104.6	165.3	47.6	7.4	94.0
Switzerland	1,042.8	29.3	14.3	1.9	.1	6.2
Belgium/Luxembourg	1,022.9	49.2	37.6	2.0	.3	24.0
Canada	998.4	3.2	225.7	130.7	.3	92.7
Netherlands	920.5	55.5	75.4	20.4	.5	49.1
Austria	775.1	64.1	18.1	2.3	.1	7.6
United Kingdom	772.3	41.7	192.0	19.4	7.7	133.5
Japan	523.8	7.3	929.7	.6	.2	926.8
Sweden	379.0	48.5	42.4	3.9	.0	21.6
Norway	318.4	8.6	10.6	.4	.0	7.6
Spain	278.4	4.9	18.4	2.5	.2	14.2
Italy	230.8	22.0	47.3	1.0	.8	29.6
Denmark	132.9	13.9	22.3	.6	.1	18.8
Portugal	98.8	.9	1.8	.5	.1	1.2
Australia	89.3	2.1	99.8	.9	.0	93.9
Greece	83.2	1.3	4.6	.1	.8	3.7
Finland	61.4	2.0	3.2	.0	.0	2.8
Ireland	51.3	1.5	8.8	.2	.4	7.0
New Zealand	21.3	.1	14.4	.1	.1	14.0
Others	156.4	.7	4.2	.4	.2	3.5

Source: UNSD COMTRADE Data Base.

Table 18

Major developing country exporters of furniture and furniture parts (ranked by average 1990-1991 values)

Country/territory	1990-1991		
	Value (millions US$)	As percentage	
		of developing countries	Of world
Taiwan Province of China	1,568	39.09	5.17
Yugoslavia (former)	493	12.29	1.62
Thailand	361	8.99	1.19
Indonesia	335	8.37	1.11
Korea, Republic of	223	5.56	0.74
Malaysia	220	5.50	0.73
Singapore	202	5.02	0.66
Philippines	184	4.59	0.61
Mexico	63	1.56	0.21
Hong Kong	62	1.54	0.20
Brazil	55	1.38	0.18
Egypt	50	1.25	0.16
Turkey	21	0.52	0.07
Chile	21	0.51	0.07
Developing market economies	4,010	100.00	13.22
Developed market economies	24,704	..	81.42
World	30,341	..	100.00

Source: UNCTAD, *Handbook of International Trade and Development Statistics, 1993.*

Table 19

United States furniture imports by origin, 1992 and 1993 (millions of dollars)

	1992	1993	% change
Taiwan Province of China	830	848	2
Canada	361	469	30
Italy	307	299	-3
Mexico	212	233	10
China	144	225	46
Malaysia	69	230	87
Thailand	82	125	53
Indonesia	62	97	55
Philippines	69	80	17
Germany	75	72	-13
World	2673	3025	13

Source: ECE, *Forest Products Annual Market Review, 1993-1994*, p. 18.

16. A further item of background information is employment in wood-related industries. Growth in numbers employed has followed expansion of wood-related industries. This is especially the case for Indonesia, which now has large numbers of workers employed in plywood mills and other wood-processing factories.

B. Main problems of trade for developing countries

17. A main problem related to trade in wood and wood products of developing countries is the depletion of forest resources caused in part by production destined for exports as well as for numerous other reasons such as conversion of forest lands to agricultural or urban uses. The pace of deforestation is seen in table 20.

18. Efforts are being made at the national level by forestry authorities and at the international level through bilateral and multilateral assistance to promote sustainable management of forests.

19. The loss and degradation of the world's forests is a global problem which has been extensively discussed in various international fora, including the United Nations Conference on Environment and Development (UNCED), which adopted a chapter on the subject in its Agenda 21 and also adopted a set of "Forest Principles" which in part deal with the relationship between trade and sustainable management.

20. A widely held view is that problems of forest management should be solved at the level of logging and forest regeneration, and that trade measures to influence or act as incentives for sustainable management are a second-best solution which should only be considered when measures at the forest level are not effective. Trade can act as an incentive by providing income and employment which Governments and local people recognize as reasons to protect forests. Trade can also provide revenue for reinvestment in reforestation to replace and renew over-logged lands.

21. Despite the potential for positive incentives for sustainable management of forests, many tropical countries with large forest resources have engaged in large-scale export booms by assigning harvesting rights to concessionaires for royalty, rent and tax payments that are only a small fraction of the commercial value of the log harvest. The damage to forest lands caused by these financial incentives to private operators has been compounded by offering only short-term leases, requiring concessionaires to begin harvesting at once, and adopting royalty systems that encourage loggers to harvest only the best trees while doing enormous damage to forest lands. As a result, logging entrepreneurs have over-exploited the resource with little concern for future productivity. In the process, damage has been done to watersheds, local climates, rich biological diversity, the ways of life of indigenous peoples and other non-timber values of the forests. Reforming forest revenue systems, forest management practices and concession terms could raise large additional revenues, promote more efficient forest resource use and curtail deforestation.

Table 20

Tropical forest resources: status and changes
(1000 ha)

	Land area	Forest area, 1990	Area deforested annually 1981-1990	Percent of area deforested annually 1981-1990
Main ecological regions				
Lowlands				
Tropical rain forest	912,000	655,500	4,900	0.75
Moist deciduous forest	1,461,100	626,400	7,300	1.17
Dry deciduous forest	720,500	212,900	2,100	0.99
Very dry forest	547,700	39,500	200	0.51
Desert	523,800	2,500	100	4.00
Uplands				
Hill and montane forest	650,500	178,100	2,300	1.29
Total	4,815,600	1,714,900	16,900	0.99
Regions				
Africa	2,243,300	600,100	5,000	0.83
Asia	896,600	274,900	3,600	1.31
America	1,675,700	839,900	8,300	0.99
Total	4,815,600	1,714,900	16,900	0.99
Selected countries				
Latin America				
Brazil	845,651	347,000	3,200	0.92
Peru	128,000	73,000	300	0.41
Bolivia	108,439	55,500	60	0.11
Venezuela	88,205	42,000	150	0.36
Colombia	103,870	41,400	350	0.85
Guyana	19,685	19,300	3	0.02
Suriname	15,600	15,200	3	0.02
Ecuador	27,684	12,300	60	0.49
Africa				
Zaire	226,760	103,800	200	0.19
Congo	34,150	21,100	22	0.10
Gabon	25,767	20,300	15	0.07
Cameroon	46,540	17,100	80	0.47
Central African Republic	62,298	3,600	5	0.14
Equatorial Guinea	2,805	1,200	3	0.25
Asia				
Indonesia	181,157	108,600	1,315	1.21
Malaysia	32,855	18,400	255	1.39
Philippines	29,817	6,500	110	1.69

Source: London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests", main report to the International Tropical Timber Organization, 19 March 1993, p. 4.

22. Wood and wood products face other problems in processing, marketing and distribution that are similar to many other commodities. The pace of moving into further processing to gain value-added has been slow. Insufficient finance, technology, training of workers and arrangements for marketing are some barriers to further processing, in addition to tariff and non-tariff barriers. A notable exception is plywood manufacture and exports from Indonesia, which have expanded rapidly and become a major industry in the country. Timely and accurate market information and transparency of the marketing system are areas where improvements are needed. Ocean transport and services for distribution are other problem areas.

23. Special marketing problems arise from the wide variety of species of wood that are traded, representing a wide spectrum of physical and other properties. Each species may be traded at various stages of processing and may be marketed in a wide variety of quality grades, sizes and specifications, depending mostly on the end-use intended. This plethora of products and qualities renders trade and commercial practices, including nomenclature, a complex marketing system. Further, efforts are being made to utilize and expand trade in the lesser known species of tropical countries in order to gain greater income from forest exploitation. Some of the lesser known species have market potential, as they have desirable properties and need both promotion to make them known to buyers and marketing arrangements for sales to them.

C. Main developments with regard to post-Tokyo Round protection policies

24. According to a GATT paper issued in 1981,[1] substantial progress was made in successive rounds of multilateral trade negotiations in the framework of the GATT in reducing tariffs applied by developed countries importing wood and wood products. Significant "most favoured nation" (M.F.N.) tariff levels continued to apply after the Tokyo Round in some countries for certain processed products such as wood-based panels, and GSP benefits were sometimes limited by means of quotas, ceilings and exclusions. A comprehensive discussion of the subject has been given by Bourke.[2]

25. As an indication of the tariff situation after the Tokyo Round as regards wood and wood products of interest to developing countries, according to the GATT paper, remaining M.F.N. duties on raw materials had been practically eliminated in developed country markets. With regard to semi-manufactures of wood, an average of duty-free as well as dutiable tariff items of Austria, Canada, the EEC, Japan, Finland, Norway, Sweden, Switzerland and the United States (weighted by imports of such items from GSP beneficiary countries) indicated that M.F.N. tariff rates applied by these countries were reduced on average by 38 per cent from 5.8 per cent to 3.6 per cent as a result of the Tokyo Round. Of the US$ 927 million of imports of such dutiable semi-manufactures by developed countries from GSP beneficiaries in 1977, some US$ 845 (or 91 per cent) were subject to M.F.N. concessions. For manufactured wood products, the average M.F.N. tariff rate applied by developed countries was reduced by 40 per cent, from 8.1 per cent to 4.9 per cent, as a result of the Tokyo Round. Of US$ 981 million of dutiable wood manufactures imported by developed countries from GSP beneficiary countries in 1977, approximately US$ 910 million (or 93 per cent) were subject to M.F.N. concessions.[3]

Chapter II

RESULTS OF THE URUGUAY ROUND

A. Improvement of market access

1. *Tariff concessions*

26. A summary of tariff commitments of developed countries on wood and wood products resulting from the Uruguay Round is given in table 21. Nineteen per cent of the tariff lines in the sector were already bound duty-free before the Uruguay Round. A bound rate provides security to exporters, as it cannot be raised under GATT rules, except by negotiation with compensation for affected trading partners. Of the dutiable and/or unbound tariff lines, 78 per cent were offered and only 2 per cent were not offered. The 2 per cent not offered, however, represented 14 per cent of the imports in the sector of wood, pulp, paper and furniture.

Table 21

Tariff commitments of developed economies on wood, pulp, paper and furniture

	Percent a/
Tariff lines already bound duty-free prior to the Uruguay Round	
Share of lines	19
Share of imports	31
Currently dutiable and/or unbound	
Offered	
Share of lines	78
Share of imports	55
Not offered	
Share of lines	2
Share of imports	14

Source: GATT, "The results of the Uruguay Round of multilateral trade negotiations, Market access for goods and services: Overview of the results," November 1994, p. 65.

a/ Figures do not add up to 100 per cent due to tariff lines and imports on which specific duties are not provided in percentage terms.

27. The following analysis is based on the full implementation of the trade liberalization commitments by the year 2005, the end of the implementation period. An important matter is that it will take that long to implement the agreed tariff cuts and their phasing-in may be implemented in the latter part of the period. Also, tariff schedules submitted in the Uruguay Round do not cover all wood products, and the averages for submitted schedules are calculated from a range of different tariffs. Thus, exporting countries will be affected differently, as each has different markets. It was agreed that the average of tariffs applied in developed countries in the sector, weighted by imports from all sources, would be reduced by 69 per cent, as seen in table 22. Weighted by imports from developing countries alone, the average of tariffs was reduced by 63 per cent, as also shown in table 22. While these percentage reductions are large, the pre-Uruguay Round tariffs were small and thus a small absolute reduction yields a large percentage reduction. Pre-Uruguay Round tariffs averaged only 3.5 per cent when weighted by imports from all sources, and 4.6 per cent when weighted by imports from developing countries alone, as seen in table 22. It is noteworthy that the post-Uruguay Round average tariff applied to imports from developing countries, at 1.7 per cent, is higher than that applied to all imports from all sources, at 1.1 per cent. This difference implies that countries other than developing countries benefit from lower tariffs. The difference between average tariffs applied to imports from developing countries and those applied to imports from all sources has diminished as a result of the Uruguay Round. This difference was 1.1 per cent (calculated as 4.6 - 3.5 per cent) before the Round and became 0.6 per cent (calculated as 1.7 - 1.1 per cent) after the Round.

Table 22

Developed country tariff reductions on wood, pulp, paper and furniture

	(billions US dollars
Import value	
All sources	40.6
Developing economies	11.5
	(Per cent)
Tariff averages weighted by:	
Imports from all sources	
Pre-Uruguay Round	3.5
Post-Uruguay Round	1.1
Percentage reduction	68.6
Imports from developing economies	
Pre-Uruguay Round	4.6
Post-Uruguay Round	1.7
Percentage reduction	63.0

Source: GATT, "The results of the Uruguay Round of multilateral trade negotiations, Market access for goods and services: Overview of the results," November 1994, p. 12.

28. The distribution of imports of wood, pulp, paper and furniture of developed countries by class of tariff in the pre-Uruguay Round and post-Uruguay Round cases for all sources and for developing country sources alone is given in table 23. Duty-free access has increased from 50 to 85 per cent of imports from all sources and from 43 to 75 per cent for imports from developing countries. The increase in duty-free imports resulted in decreases of shares of imports in the other tariff classes. It is noteworthy that 17 per cent of imports from developing economies are still subject to tariffs of between 5.1 and 15.0 per cent after the Uruguay Round. The shares of imports in this table may be based on 1988 data, the base year for the negotiations, and the composition of imports by tariff class could change over time. It is also noteworthy that the share of post-Uruguay Round duty-free imports from developing countries, at 75 per cent, is less than the comparable figure for imports from all sources, at 85 per cent. This implies that countries other than developing countries have greater duty-free access.

29. As regards tariff escalation, table 24 gives the tariff escalation and change in it for separate categories of wood and paper imported by developed countries. Tariff escalation in the table was measured by the tariff wedge, which is the absolute difference between the tariffs applied to processed and unprocessed products. Weighted average tariffs were calculated using as weights the imports from all sources into developed country markets. Tariff escalation is eliminated when the tariffs applied to processed and unprocessed products are the same and tariff escalation is reduced when there is a fall in the tariff wedge. The percentage change in tariff escalation is calculated as the decline in the tariff wedge, divided by the original tariff wedge.

30. As seen in table 24, tariffs on the categories of paper were reduced to zero with the exception of a small tariff on printed matter, hence tariff escalation was eliminated, with the exception of printed matter where escalation was reduced by 83 per cent. Paper products are, however, of minor importance to developing countries.

31. For the categories of wood listed in table 24, the reductions in weighted average tariffs are the same as the change in tariff escalation, since the raw material, wood in the rough, was duty-free before and after the Uruguay Round. Thus, the reductions in tariff wedges are the same as the reductions in tariffs. Reductions were 30 per cent for wood-based panels, 50 per cent for semi-manufactures and 67 per cent for wood articles.

32. Also of interest are the magnitudes of the post-Uruguay Round tariffs on categories of wood, given in the second column of table 24. Significant tariffs are 6.5 per cent for wood-based panels and 1.6 per cent for wood articles. They illustrate that tariff escalation still exists to some extent.

Table 23

Developed economy tariff profiles for wood, pulp, paper and furniture

	Total import value (millions US dollars)	Percentage of imports 1/											
		Duty-free 2/		0.1-5%		5.1-10%		10.1-15%		15.1-35%		Over 35%	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
All sources	40 590	50	85	24	6	20	7	2	2	4	0	1	0
Developing economies	11 503	43	75	19	7	30	16	2	1	6	0	1	0

Source: GATT, "The results of the Uruguay Round of multilateral trade negotiations, Market access for goods and services: Overview of the results," November 1994, p. 68.

1/ Figures exclude tariff lines for which duties are not available in *ad valorem* terms since these lines cannot be distributed by duty ranges.

2/ Figures refer to tariff lines which were duty-free prior to the Uruguay Round, including those that were fully bound, partially bound or unbound.

Pre: Pre-Uruguay Round
Post: Post-Uruguay Round

Table 24

Change in tariff escalation in selected product categories

Product category by stage of production	Weighted average			Change in tariff escalation
	Pre-UR	Post-UR	Reduction	
Wood				
Wood in the rough	0.0	0.0	0	na
Wood-based panels	9.4	6.5	31	-30
Semi-manufactures	0.9	0.4	50	-50
Wood articles	4.7	1.6	67	-67
Total	2.0	1.1	43	na
Paper				
Pulp and waste	0.0	0.0	0	na
Paper and paperboard	5.3	0.0	100	-100
Printed matter	1.7	0.3	83	-83
Paper articles	7.3	0.0	100	-100
Total	3.5	0.0	99	na

Source: GATT, "The Uruguay Round deal, An outline of the new multilateral trading system", April 1994, p. 14.

33. Changes in tariff escalation on the categories of wood and paper products imported by Japan, the European Union, the United States and Canada are given separately in table 25. Tariffs on the categories of paper have been entirely eliminated and consequently tariff escalation on these products has been eliminated. For wood products, there were considerable reductions in tariff escalation, as seen in the far right-hand column of table 25. Nevertheless, significant post-Uruguay Round tariffs remain for wood-based panels in the three countries and the European Union, ranging from 5.3 to 8.4 per cent, as well as for wood articles imported by Japan, the United States and Canada (tariffs ranging from 2.7 to 5.0 per cent) and semi-manufactures imported by Japan at a tariff of 2.2 per cent. There thus remains tariff escalation on these articles.

34. Table 26 gives Uruguay Round tariff reductions on wood and wood products of current high export interest to individual developing countries. High export interest was taken as (i) accounting for 20 per cent or more of foreign exchange earnings from exports of industrial products (excluding petroleum), and (ii) accounting for 5 per cent or more of total merchandise exports (excluding petroleum). Import data, mostly from 1988, were used as a proxy for exports of individual countries. Tariff reductions shown in the table were calculated using as weights the imports from all sources into the area in question (developed economies, North America and Western Europe).

35. As seen in table 26, the countries identified as having a high export interest in the sector of wood, pulp, paper and furniture are major tropical timber exporters but also include some small exporters for which the sector is important to their small economies, notably Swaziland, Cambodia, Myanmar, Solomon Islands and Paraguay.

Table 25

Changes in tariff escalation on wood and paper products imported by some developed economies from developing economies

Product category/ stage of processing		Imports (millions of US dollar)	Share of each stage (per cent)	Tariff			Changes in tariff escalation a/ (per cent)
				Pre-UR (per cent)	Post UR (per cent)	Absolute reduction	
Japan							
Wood:	Wood in the rough	2,060	53.6	0.0	0.0	0.0	-
	Wood-based panels	597	15.5	17.8	8.4	9.4	-52.8
	Semi-manufactures	924	24.1	4.2	2.2	2.0	-47.6
	Wood articles	260	6.8	4.9	2.7	2.2	-44.9
	Total	3,841	100.0	4.1	2.0	2.1	-51.2
Paper:	Pulp and waste	194	56.3	2.2	0.0	2.2	-100.0
	Paper and paperboad	62	18.1	5.2	0.0	5.2	-100.0
	Printed matter	41	12.0	0.3	0.0	0.3	-100.0
	Paper articles	47	13.6	4.2	0.0	4.2	-100.0
	Total	345	100.0	2.8	0.0	2.8	-100.0
European Union							
Wood:	Wood in the rough	73	3.7	0.0	0.0	0.0	-
	Wood-based panels	560	28.3	10.0	6.8	3.2	-32.0
	Semi-manufactures	1,121	56.6	0.9	0.4	0.5	-55.6
	Wood articles	226	11.4	5.5	0.1	5.4	-98.2
	Total	1,981	100.0	3.9	2.2	1.7	-43.6
Paper:	Pulp and waste	322	38.8	0.0	0.0	0.0	-
	Paper and paperboad	251	30.3	7.9	0.0	7.9	-100.0
	Printed matter	190	22.9	1.1	0.0	1.1	-100.0
	Paper articles	67	8.0	10.3	0.0	10.3	-100.0
	Total	829	100.0	3.5	0.0	3.5	-100.0
United States							
Wood:	Wood in the rough	16	1.8	0.1	0.0	0.1	-100.0
	Wood-based panels	355	38.8	8.0	7.4	0.6	-6.3
	Semi-manufactures	318	34.7	1.3	0.1	1.2	-91.7
	Wood articles	226	24.8	5.7	3.2	2.5	-42.9
	Total	915	100.0	5.0	3.7	1.3	-24.5
Paper:	Pulp and waste	233	32.4	0.0	0.0	0.0	-
	Paper and paperboad	150	20.9	1.2	0.0	1.2	-100.0
	Printed matter	51	7.0	0.5	0.0	0.5	-100.0
	Paper articles	286	39.7	4.8	0.0	4.8	-100.0
	Total	720	100.0	2.2	0.0	2.2	-100.0
Canada							
Wood:	Wood in the rough	0	0.6	0.7	0.5	0.2	-28.6
	Wood-based panels	36	50.5	8.0	5.3	2.7	-34.2
	Semi-manufactures	25	34.9	1.6	1.0	0.6	-44.4
	Wood articles	10	13.9	9.7	5.0	4.7	-50.0
	Total	71	100.0	6.0	3.7	2.3	-39.6
Paper:	Pulp and waste	6	10.5	0.0	0.0	0.0	-
	Paper and paperboard	14	26.4	6.5	0.0	6.5	-100.0
	Printed matter	15	27.7	7.4	0.0	7.4	-100.0
	Paper articles	19	35.4	10.3	0.0	10.3	-100.0
	Total	54	100.0	7.4	0.0	7.4	-100.0

Source: GATT, "The results of the Uruguay Round of multilateral trade negotiations, Market access for goods and services: Overview of the results," November 1994, pp. 72-75.

a/ Figures additional to those in source cited above.

Table 26

Uruguay Round tariff reductions on wood, pulp, paper and furniture of current high export interest to individual developing countries

	Percentage tariff reduction			Countries with a current high export interest in the product
	Developed economies	North America	Western Europe	
African countries	69	76	67	Cameroon, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Ghana, Swaziland
Developing Asian countries	69	76	67	Cambodia, Indonesia, Malaysia, Myanmar, Solomon Islands
Latin American countries	69	76	67	Paraguay

Source: GATT, "The Uruguay Round deal: An outline of the new multilateral trading system", April 1994, pp. 19-21.

36. Most developing exporting countries benefit from special preferences under bilateral and multilateral schemes which provide for reduced tariffs or duty-free entry of imports of wood and wood products from the countries concerned. The most important of these schemes is the GSP, which relies on voluntary concessions by importing countries which specify applicable quotas. Reductions in MFN tariff rates in the Uruguay Round have eroded the advantage to developing country exporters under the GSP and other agreements for special preferences for these countries. A comparison of MFN rates with a combination of GSP and MFN tariff rates is seen in table 27, which illustrates reductions in tariff levels as agreed in the Uruguay Round on the assumption that the tariffs were in force in 1988. As shown in table 27, the MFN/GSP rates are much closer to the MFN rates alone in the post-Uruguay Round case as compared with the pre-Uruguay Round case.

37. Tariffs on imports of wood and wood products are applied by developing countries both for protection of their domestic processing industries and as a means to raise general government revenues. For example, post-Uruguay Round bound rates of duty of the Republic of Korea are 2 per cent for tropical logs and 10 per cent for tropical sawnwood and veneer. Thailand's tariffs are 5 per cent on logs, 10 per cent on sawnwood and 20 per cent on plywood.

2. *Non-tariff barriers*

38. A wide range of non-tariff barriers affect trade in wood and wood products, including the following, as summarized by Bourke:[4]

Quantitative restrictions, such as combined tariff/quota (TQ) systems which involve higher tariff rates on all imports above a fixed quota ceiling;

Measures influencing prices, including variable levies and "voluntary" price agreements with exporters;

Health and technical standards, for example, pest and disease controls or end-use restrictions related to structural performance;

Customs and administrative entry procedures, which many exporters claim are unnecessarily complicated and time-consuming and which add to the cost of importing products, especially for smaller firms;

Trade agreements, including trade association agreements or regional trading blocs, which can also distort trade patterns, for example through voluntary arrangements to control volumes and/or prices;

Ocean freight, including not only the high cost of transporting timber products to markets but also restrictions on shipping services, for example government requirements that imports arrive on domestic shipping companies or anti-competitive behaviour by shipping firms;

Other measures, including all manner of direct and indirect government subsidies which give some competitive advantage to domestic industry over foreign timber producers, from tax credits for plantation forestry to R&D assistance to the processing industry.

39. Some non-tariff measures directly impinge on trade in wood and wood products, such as quantitative restrictions on imports. Others operate indirectly and may have important functions apart from any intention to restrict imports to protect domestic industries. Because of their diversity and complexity, an assessment of non-tariff barriers is not possible in summary form. Proposals for measures to promote conservation of forests or other environmental aspects are discussed separately below, rather than as NTBs.

40. Some exporting countries have instituted bans on exports of logs, export restrictions and export taxes. As seen in table 28, a number of tropical timber exporting countries have imposed such export measures. One justification cited for these policies is that they compensate exporters for import barriers of developed countries on imports of plywood and other processed products. The rationale is that export measures make the price of logs higher to processors in importing countries, while reducing the cost disadvantage faced by domestic processors in the timber-producing countries as a result of the import barriers. Another aim is creation of value-added in domestic processing in the timber exporting countries for gains in income, employment and export earnings. Another argument is that, by gaining more revenue through promotion of value-added processing, harvesting pressure on the forests would be reduced.

B. Trade-related environmental measures (TREMs)

41. Trade-related environmental measures (TREMs), i.e. environmental measures which are applied to traded products and which have possible trade effects, could be considered as barriers to trade when they have a negative impact on trade. However, given global commitments to the environment and sustainable development, TREMs may be considered separately.

Table 27

Reduction in trade-weighted tariff averages for imports by quad countries in 1988

Importing market	World				Developing countries						
	Value (millions of dollars)	MFN tariff average		Reduction (%)	Value (millions of dollars)	MFN tariff average		Reduction (%)	MFN/GSP a/ tariff average		Reduction (%) b/
		A	B			A	B		A	B	
					Cork and wood						
Canada	335	7.6	4.5	40.2	87	8.3	5.0	39.5	4.9	4.7	4.3
European Union	3 174	8.3	4.7	43.2	1 195	8.2	4.5	44.9	-	-	-
Japan	1 082	12.9	6.0	53.4	876	14.3	6.7	53.1	11.9	5.8	51.6
United States	2 092	4.7	2.7	42.6	1 099	6.1	4.3	29.5	3.2	2.9	9.4
					Furniture						
Canada	735	13.8	5.5	60.1	109	14.6	5.8	60.1	9.8	5.8	41.0
European Union	2 389	5.6	0.8	86.0	569	5.7	0.7	87.1	-	-	-
Japan	1 019	5.1	0.8	83.9	620	5.1	0.7	86.3	-	-	-
United States	4 885	3.6	0.1	97.6	2 307	3.8	0.1	97.4	-	-	9.6

Source: UNCTAD, *Trade and Development Report, 1994*, pp. 145-146.

Notes: A - Pre-Uruguay Round; B - Post-Uruguary Round.
Imports: Including duty-free imports.

a/ Calculated by applying GSP tariff rates, where applicable, instead of MFN rates, to the entire imports of the item from the preference-receiving countries concerned.

b/ For reasons of statistical significance, average reductions from pre-Uruguay Round tariffs that were below 1 per cent *ad volorem* have not been calculated.

Table 28

Export taxes and bans on tropical timber, 1989

Country	Tax rate/export policy	Remarks
Cameroon	2% valeur mercurial	Export taxes are also reported to be 11% of average f.o.b. price.
Central African Republic	Logs: US$ 11.45 per m^3 for red woods, US$ 11.07 for white woods. Sawn timber: US$ 250 per m^3. Veneer: US$ 2.90 per m^3.	Tax is imposed on processed wood exports; roundwood equivalents are much lower.
Côte d'Ivoire	Specific rates variable by species.	*Sapelli:* US$ 57.49 per m^3. *Sipo:* US$ 89.20 per m^3. *Assamela:* US$ 138.27 per m^3.
Ghana	Log export ban enforced since 1979.	
Indonesia	20% *ad valorem* on logs	Tax imposed only on some logs in inaccessible regions. Log export ban since 1985 has made the tax irrelevant for other regions.
	Specifc export taxes on sawn timber, ranging from US$ 250 - 2400 per m^3.	Specific export taxes on sawn timber introduced in 1989; plywood exempt from all export taxes.
Liberia	Ranges from US$ 1.44 per m^3 for low valued species to US$ 58.57 per m^3 for high valued species (eg. *Sipo*).	Tax is called the Industrialization Incentive Fee and is imposed on logs only.
Malaysia: Pennisular	Log export ban since 1971.	
Sabah	No specific export tax or ban but see remarks.	The Sabah timber royalty has a strong export tax feature: the royalty rate for log exports is almost 10 times the rate for logs used domestically.
Sarawak	15% *ad valorem* of f.o.b. log value.	Tax applies to one hardwood species only.
Papua New Guinea	10% of f.o.b. log values.	Tax reported to have been widely evaded through transfer pricing. Log export ban proposed.
Phillipines	Log exports restricted to 25% of annual allowance cut since 1979.	Ostensibly to control deforestation.

Source: Gillis (1990) in: London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests," main report to the International Tropical Timber Organization, 1993. p. 60.

42. Recognition by Governments of the importance of the relationship between the functioning of the multilateral trading system, on one hand, and the improvement of environmental protection and the promotion of sustainable development, on the other hand, has developed quickly over the past six years. When the matter was raised at the ministerial level in GATT in 1990, there was considerable hesitancy on the part of many GATT contracting parties both over extending the work of GATT in this direction, given that until then GATT had focused almost exclusively on technical trade matters, and over the risk they perceived of environmental concerns being used as "green protectionism" to disguise underlying purely commercial protectionist motives and measures. Many developing countries, in particular, feared that their trade interests might be placed in serious jeopardy by efforts of their developed country trading partners to raise and enforce environmental standards which they could not afford. Of special importance was that tropical timber exporting countries felt that they were being unfairly singled out for discriminatory treatment as, in their view, developed countries were not subject to the stringency in forest management which developed countries wished to see implemented in the tropical timber exporting countries.

43. Further consultations in GATT were influenced by several factors. One was the recognition that Governments were including trade provisions in international environmental agreements such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Montreal Protocol and the Basel Convention, and it was felt that the inclusion of trade provisions should be examined in the context of GATT. Another factor was the increasing interest of developed countries in environmental measures, such as eco-labelling of wood products, whose trade effects could be serious for many exporters. Also, at that time, a GATT dispute panel reported its findings on an embargo imposed by the United States against imports of tunafish from Mexico because, under United States regulations, there were excessive killings of dolphins as a result of the fishing methods used in international waters. The dispute brought to prominence a debate both within and outside GATT over the use of trade measures by one country to try to change environmental policies and the process and production methods (PPMs) used by another country in order to achieve the environmental goals of the first country. In some respects, the tuna/dolphins debate is similar to the debate over tropical timber trade and loss of tropical forests. Another factor was that UNCED, held in 1992, paralleled well the view of GATT contracting parties that liberal trading conditions on world markets, along with financial and technological resource transfers, were the best ways to achieve sustainable development, and that conclusion of the Uruguay Round was the most important contribution that GATT could make to implementation of the results of UNCED. Similarly, the parts on trade in the "Forest Principles" agreed at UNCED reflected solid support for liberal trading conditions (see paragraph 51 below).

44. As regards international trade in wood and wood products, environmental problems stem almost exclusively from the logging stage. At later stages of marketing, processing and use, wood products are essentially consumer-friendly in that they generally do not pose dangers to consumers and, although there are problems at the disposal stage, wood products are biodegradable and could be used as fuel or, in the case of paper, they can be recycled. However, because of differences in values and perceptions on issues such as loss of plant and animal species accompanying commercial logging, views on the use of TREM differ widely between Governments and within them, as well as among a large and growing number

of conservation, business and consumer groups which influence their Governments.

45. Trade rules of the multilateral trading system and environmental protection are not necessarily conflicting. There is a widespread view that trade can provide positive incentives for sustainable management of forests and that trade and sustainable management can be mutually supportive. In this view, trade measures should help trade, not hinder it, in order to achieve environmental objectives. Further, a widespread view is that trade policies of importing countries, both developed and developing, should be viewed in the larger context of the requirement of sustainable development of developing exporting countries, and these trade policies should support sustainable development.

1. *TREMs and multilateral environmental agreements (MEAs)*

46. Negotiations in the Uruguay Round took place during a period when there was intense international concern and debate over environmental issues which culminated in UNCED held in 1992. The issues relating to forests, including trade, proved to be some of the most difficult for UNCED.

47. Forests, unlike global commons such as oceans, space and polar regions, are located in sovereign territory of particular countries, but they have high value to other countries because of their rich biodiversity, their role in the carbon cycle and global warming as well as local and regional climate change, and their potential for contribution to the sustainable development of the very countries in which they are located. Tropical forests alone are estimated to contain more than half of the world's plant and animal species, and all forests taken together are estimated to have 90 per cent of all species. Thus, forests are to a great extent synonymous with biological diversity. The question of the right to exploit production forests, i.e. those that may be commercially logged, raises additional questions about repercussions for other resources and functions of forests. For the log-producing countries, the rights of ownership are clear, and they assert sovereignty over use of the forests in their countries. The interests of other countries may, however, differ from those of the log-producing countries. Producing countries argue that, if an importing country attempts to use trade measures to regulate or influence production which harm that exporting country's commercial interest, then that importing country is interfering in the sovereignty of the exporting country over its own territory.

48. An avenue to avoid problems arising from sovereignty would be to conclude an MEA with trade-related provisions that enjoy the full support of the participating exporting and importing countries and thus preclude such problems. There could still remain the question of whether to use discriminatory trade measures against countries which are not parties to the MEA.

49. GATT has traditionally been a closed and rules-based organization concerned with technical work on trade matters. The WTO will be broader in its coverage of issues, more open in its ways of operating and more oriented to reconciling its work with that of other organizations where differences exist on trade-related matters.

50. It is noteworthy that, for natural resources such as forests that are under the jurisdiction of sovereign States, those same States have undertaken commitments in UNCED and under multilateral environmental agreements (MEAs) to conserve resources for the benefit of the present and future generations, in the common interests of mankind.

51. Of particular interest in the context of an MEA which might address trade in wood and wood products is an initiative for a global convention on forests which was pursued in the UNCED process. It did not prove possible to secure sufficient support to start negotiations then or to take a decision that negotiations would commence after the Rio Conference, held in 1992. The Conference did, however, agree on a text of a "Non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests", known less formally as the "Forest Principles".[5] They represent a first global consensus on forests, including trade measures, both as incentives for sustainable management of forests and in terms of kinds of measures to be avoided. In this regard, principles 13 and 14 are of particular relevance and read as follows:

> 13. (a) Trade in forest products should be based on non-discriminatory and multilaterally agreed rules and procedures consistent with international trade law and practices. In this context, open and free international trade in forest products should be facilitated.
>
> (b) Reduction or removal of tariff barriers and impediments to the provision of better market access and better prices for higher value-added forest products and their local processing should be encouraged to enable producer countries to better conserve and manage their renewable forest resources.
>
> (c) Incorporation of environmental costs and benefits into market forces and mechanisms, in order to achieve forest conservation and sustainable development, should be encouraged both domestically and internationally.
>
> (d) Forest conservation and sustainable development policies should be integrated with economic, trade and other relevant policies.
>
> (e) Fiscal, trade, industrial, transportation and other policies and practices that may lead to forest degradation should be avoided. Adequate policies, aimed at management, conservation and sustainable development of forests, including where appropriate, incentives, should be encouraged.
>
> 14. Unilateral measures, incompatible with international obligations or agreements, to restrict and/or ban international trade in timber or other forest products should be removed or avoided, in order to attain long-term sustainable forest management.

52. The initiative for a global convention on forests is still being pursued in the United Nations Commission on Sustainable Development, as well as in other fora. If a convention is successfuly concluded, any trade-related provisions in it could be examined in the WTO for consistency with GATT and the other Uruguay Round Agreements. If, as would seem likely, a forests convention were

built around the Forest Principles, including principles 13 and 14 given above, such trade-related provisions in a convention would seem to be broadly consistent with the principles and practices of GATT and the WTO.

53. It is noteworthy that the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) requires its contracting parties to allow import and export of endangered species only under strict regulation. Endangered species of trees that are commercially valuable could be included in the listed species, with consequent reduction in trade in them. The Convention on Biological Diversity concluded in 1992 under the auspices of UNEP does not contain trade-related provisions pertaining to wood and wood products, although it does concern conservation and sustainable use of biological diversity which, as mentioned above, is closely related to the world's forests. The United Nations Framework Convention on Climate Change concluded in 1992 does not contain trade provisions but, under it, protocols could be negotiated in the future and such protocols conceivably could include trade-related provisions. Lastly, the International Tropical Timber Agreement, 1994 specifically provides in its article 36 that nothing in the Agreement authorizes the use of measures to restrict or ban international trade in timber and timber products. The Agreement is designed to provide technical support for research and development on forest management and other areas and to pursue policy work of the International Tropical Timber Organization in these areas.

54. An MEA need not be limited to a formal treaty which is negotiated in a conference and which Governments subsequently join as contracting parties. In a broader sense, an MEA could include a decision by an international body. For example, the General Assembly of the United Nations took a decision in December 1991, not binding on member States, that drift-net fishing should be banned from 1993. Such action raises a general question of the extent to which negotiation of MEAs are affected by the trade rules of the multilateral trading system or, conversely, the extent to which the system responds to environmental imperatives and is relevant in the area of trade and the environment.

2. Trade and the environment in the Uruguay Round Agreements

55. The Ministerial Decision on Trade and Environment agreed in Marrakesh ensured that the linkages between trade policies, environmental policies and sustainable development would be pursued in the WTO. The WTO's functions are both analytical and prescriptive: to identify the relationship between trade measures and environmental measures in order to promote sustainable development, and to make appropriate recommendations on whether any modifications of the provisions of the multilateral trading system are required. However, two important constraints guide the WTO in its work in this area. One is that the WTO's competence for policy coordination in this area is limited to trade. The second is that, if problems of policy coordination to protect the environment and promote sustainable development are identified through its work, these problems are to be resolved in a way that upholds and safeguards the principles of the multilateral trading system. The WTO Committee on Trade and Environment has already done much substantive work in this area.

(a) Provisions of GATT 1994 and the Uruguay Round Agreements on certain disciplines

56. There are a number of complex provisions of GATT 1994 and the Uruguay Round Agreements on certain disciplines which pertain to interests of developing countries in trade in wood and wood products.

57. The Agreement on Technical Barriers to Trade (ATBT) aims to ensure that use of mandatory technical regulations, voluntary standards and conformity assessment procedures do not create unnecessary barriers to trade. It encourages countries to use international standards where these are available, but it does not require them to harmonize their domestic regulations and standards as a result of international standardization activities.

58. The ATBT covers technical regulations concerning products and their process and production methods (PPMs) that affect characteristics of products. As regards PPMs that do not affect the characteristics of the products, some countries consider that such PPMs are excluded from the coverage of the ATBT, while other countries maintain that the matter is not decided. No country asserts that these PPMs are definitely covered by the ATBT. The matter of coverage of PPMs which do not affect characteristics of products is important for trade in timber, as the commodity falls in this category. Thus, schemes for certification and eco-labelling of products made of sustainably produced timber, even for voluntary and non-governmental schemes, might or might not be subject to certain provisions of the ATBT.

59. Certification that timber is sustainably produced refers to documentary evidence that certain standards have been met with regard to origin and environmental aspects. Such certification is most likely to be done by an independent certifier, although a scheme based on self-declaration by a supplier is conceivable. Eco-labelling refers to a label with identification of the certifier and perhaps other more detailed information pertaining to environmental aspects of the source.

60. The provisions of the ATBT deal with notifications and transparency of certification and eco-labelling schemes that might be required or provided upon request. Other substantive matters could be equivalency of standards of sustainability in two or more different schemes, mutual recognition of schemes in place in different countries, dispute settlement and technical assistance. UNCTAD, the International Standards Organization (ISO) and the International Trade Centre (UNCTAD/GATT) also have programmes of technical assistance on eco-labelling.

61. The Agreement on the Application of Sanitary and Phytosanitary Measures is of some importance for wood and wood products and is relevant, for example, as regards certain chemicals contained in glue used for plywood and treatments for pests and diseases.

62. The Agreement on Agriculture, through effects on agricultural trade, location of production and competition for land use between agriculture and production forests, could have some indirect relevance to trade in wood and wood products.

63. The Agreement on Subsidies and Countervailing Measures may be of some importance to trade in wood and wood products. If large sums of money were available, they would no doubt be earmarked for specific purposes such as reforestation, capacity-building in national forestry administrations or improvements in wood marketing and processing, and not for financial contributions of Governments to businesses or through programmes for income or price support. Under-pricing of standing timber might also be a subsidy, as was the issue in a trade dispute over Canadian exports of softwood timber to the United States. Another area is environmental countervailing and anti-dumping duties. Here there is an issue of indirect subsidies attributable to inadequate environmental protection.

64. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIP) deals with commercial exploitation of biological diversity and is relevant to trade in wood and wood products through the linkage of trade as one possible cause or cure for deforestation. As noted earlier, estimates have been made that tropical forests alone contain more than half of the world's plant and animal species and that all the world's forests contain about 90 per cent of all species.

65. The General Agreement on Trade in Services provides for liberalization of services that are related to trade in wood and wood products such as maritime transport, insurance and banking, and thus is of importance to this trade sector.

(b) GATT and the General Exceptions

66. It has been argued that the "general exceptions" provide for environmental protection to some extent. However, an understanding of their limitations is necessary in the context of possible TREM for wood and wood products.

67. The text of GATT 1947, which has been incorporated in the text of GATT 1994, does not contain direct references to the need to protect and preserve the environment. However, the provisions of Article XX, "General exceptions", of GATT 1947, also carried over to GATT 1994, allow contracting parties to deviate from the trade rules in order to protect human, animal or plant life or health, or to conserve exhaustible natural resources. These exceptions are generally understood to apply in a contracting party's own territory, not extraterritorially as in the case of the United States restrictions on imports of tunafish from Mexico because of excessive incidental killing, according to United States legislation, of dolphins in the fishing methods used in international waters. The preambular paragraph and relevant subparagraphs of Article XX are as follows:

> "Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:

.. (b) necessary to protect human, animal or plant life or health;
.. (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption; ..."

68. The above text is subject to different legal interpretations and the jurisprudence of previous Panel decisions which have added particular interpretations and tests to screen out certain purely commercial protectionist measures and for other purposes. Further, the legal history and intent behind negotiations dating back to the Havana Conference are of relevance in interpreting the exceptions. They therefore should be read with caution in respect of application in specific cases such as for wood and wood products.

69. The general exceptions in Article XX come into consideration for environmental or other purposes when a national measure raises a bound tariff without compensation, imposes a quota, denies national treatment or otherwise infringes a benefit accorded to another party in the GATT. The references in GATT 1994 for some of these situations are described below:

70. Article II:1(b) provides for bound tariffs. Other than for certain exceptions provided, Article XXVIII:2 provides for an offer of negotiation and agreement for compensation by lowering tariffs on other products in an endeavour to maintain a general level of reciprocal and mutually advantageous concessions.

71. Article XI forbids the imposition of quantitative restrictions, including quotas, with certain exceptions which include their use when necessary in connection with agricultural programmes (Article XI:2(c)). Other exceptions when quantitative restrictions may be used are for balance-of-payments safeguards (Articles XII and XVIII:B) and for emergency action on imports (Article XIX).

72. An internal measure in an importing country could infringe upon an exporting country's rights under the national treatment provisions of Article III, if such a measure discriminates against an imported product based on its process and production method (PPM), particularly where the PPM used has no effect on the characteristics or the quality of the imported product, as is the case for wood products with the possible exception of some paper products. Further, Article 1, which lays down the MFN rule, prohibits discrimination between like products imported from different countries. These prohibitions are particularly important for wood and wood products, as a number of suggested TREMs for these products would distinguish between sustainably produced and non-sustainably produced timber, i.e. on the basis of a PPM. Examples of such measures are imposition of additional tariffs or more severe quantitative restrictions on products made of non-sustainably produced timber or liberalization of trade for sustainably produced timber, while trade barriers would remain for wood products for which no substantiated claim of sustainability can be made.

73. For any of the above-mentioned infringements, a challenge may be made by a contracting party seeking nullification or impairment. The party which enacted the measure is responsible for establishing the validity of an exception which would allow it to depart from GATT's trade rules.

74. For an exporting country wishing to defend a TREM applying to its own territory, Article XX, paragraphs (b) and (g) provide possible grounds for the trade measure to be consistent with GATT 1994.

75. For an importing country wishing to use TREMs, Article XX, paragraph (b) and (g), as mentioned above, have generally been taken as applying only to a country's own territory and they cannot be used extraterritorially (i.e. applying to logging methods in other countries) to allow the importing country to depart from trade rules of GATT 1994.

76. Except for a tariff for which compensation has been given, the measures mentioned above (quotas, measures which differentiate between sustainably produced and non-sustainably produced timber, or other measures which infringe upon a benefit) cannot be used to influence forest management in other countries without infringements which could lead to nullification or impairment for failure of a contracting party to carry out its obligations under the GATT 1994.

Chapter III

LIKELY IMPACT OF THE URUGUAY ROUND ON TRADE, PRICES AND USE OF FORESTS

77. The general impact of the Uruguay Round Agreements, as may be surmised from the tables in chapter II on reductions in tariff barriers to trade in wood and wood products, will involve effects that occur either through higher prices paid to producers, if increases in prices are passed back through the long chain of marketing and processing, or through trade creation brought about by lower prices for consumers, or a variety of combinations of both outcomes. Higher prices could result from reductions in the margins between producer prices and import prices. Also, as discussed below, global income gains resulting from the Uruguay Round could have a positive effect on prices. Higher prices for producers could possibly act as an incentive for expansion of logging, with consequences in terms of depletion of forest resources, or they could provide additional financial resources needed for sustainable management of forests, or there could be a range of combinations of both results, depending on different conditions and varying from place to place and product to product. Effects of lower prices for consumers due to reductions in tariff barriers have been studied by Barbier.[6]

78. As seen in table 29, exports of forestry products in the year 2005, when the results of the Uruguay Round will be fully implemented, were estimated by the GATT secretariat to be in the range of 3.7 to 5.6 per cent higher than the level that would have occurred in the absence of the Uruguay Round. Scale economies and the nature of competition in sectors other than forestry products account for the differences in the percentages for forestry products in the three versions presented in table 29. A complex intersectoral model, which took into account world income gains resulting from the Uruguay Round, was used to make the estimates.[7] GATT gave an actual value of exports in 1992 of US$ 7.7 billion.

79. Reductions in tariffs and non-tariff barriers to trade in wood and wood products could lead to some trade diversion as new market opportunities are seized and reduction of tariff escalation provides incentives for more value-added processing in the timber producing countries that export wood manufactures as well as in third countries which import raw material and export manufactured wood products to consuming countries.

80. In considering the effects of the Uruguay Round Agreements, it should be noted that tariff barriers to trade in wood and wood products were generally low before the Round, and the reduction in most of them, although large in proportionate terms, resulted in tariff rates that were not very much lower in absolute terms. It should also be noted that tariff schedules submitted do not apply to all wood products and that the averages for submitted schedules that are presented in the tables in chapter II are calculated from a range of different tariffs. Another aspect concerns differences in the phasing-in of tariff reductions over time. An exporting country or a particular manufacturing company would have to consider all of the specific conditions in assessing the results of the Round and deciding on any changes in a processing and marketing strategy to take advantage of new market opportunities.

Table 29

Estimated increase in exports of forestry products due to the implementation of the liberalization of trade in goods, year 2005 (Percentage change in volume)

	Version of the model		
	Version 1	**Version 2**	**Version 3**
Forestry products	3.7	4.1	5.6

Source: GATT, "The results of the Uruguay Round of multilateral trade negotiations, Market access for goods and services: Overview of the results," November 1994, p. 29.

Note: The scale economy sectors in the second and third versions of the model are mining, textiles, clothing, chemicals, steel, non-ferrous metals, fabricated metal products, transport equipment and other manufactures. The other sectors (including grains, other agriculture, forestry and fishery) are assumed to operate with constant returns to scale technologies.

Version 1: Assumes constant returns to scale (no economies of scale), and perfect competition.
Version 2: Assumes increasing returns to scale in industrial sectors, and perfect competition.
Version 3: Assumes increasing returns to scale and monopolistic competition in industrial sectors.

81. Non-tariff barriers to trade in wood and wood products have not yet been reviewed in the context of reductions in them which will result from the Uruguay Round Agreements.

82. A special category of measures applicable to trade in wood and wood products is trade-related environmental measures (TREMs). Many questions in this area have yet to be discussed and decisions have to be taken in the WTO concerning any necessary changes in the rules of the multilateral trading system. Decisions under other multilateral environmental agreements (MEA) could also be relevant or lead the way in some TREM, although this does not seem to be likely for wood and wood products. The negotiation of an international convention on forests, if it proceeds as hoped for by some Governments, would be likely to contain references to trade but if, as expected, such a convention were based on the "Forest Principles" negotiated at UNCED, these references would be generally liberal.

83. Multilateral negotiations and decision-making are notorious for the time required to succeed and for the difficulties which have to be overcome to achieve a consensus that will later be supported by serious concerted action by all participants. Consideration of the role of TREMs for wood and wood products is complicated by the enormous scientific uncertainty about the effects of logging on forest regeneration, differences in values held and perceptions of actual situations of forest resources, difficult problems of measurement and monitoring of the state of forests, and legal aspects of sovereignty over the use of a country's own forests.

84. While a prognosis on the use of TREMs is difficult to make, certain measures which are least trade-restrictive, such as certification and eco-labelling with voluntary participation, could well proceed, with significant effects in environmentally sensitive markets. A recent study by Simula and Ghazali[8] reported that in 1993 an estimated 1.5 million cubic metres of timber and timber products (excluding paper products) were certified as coming from sustainably managed sources, and only four of the certification systems surveyed could be considered operational. Although not all of the certified timber entered international trade, this quantity is the equivalent of less than 0.5 per cent of world trade in industrial logs, sawnwood, plywood and veneer. Most of the certified timber was tropical in origin and was sold in the United States. Despite this small level of activity, the number of schemes and their volumes of trade are expected to grow.

Chapter IV

FURTHER ACTION

A. Gaps in the Uruguay Round and further international action on tariffs and non-tariff barriers

85. Although the Uruguay Round came close to agreeing on elimination of tariffs in the sector of wood and wood products, it did not wholly succeed. There may still be enough political momentum to continue the negotiating process with a view to eliminating all tariffs. Also, as mentioned in chapter II, two per cent of the tariff lines in the sector were not offered, and these two per cent represented 14 per cent of the value of exports of the sector. Thus, attempts could be made in this group of tariff lines.

86. The situation and impact of the Uruguay Round on non-tariff barriers should be reviewed and recommendations made in this diverse and complicated field.

87. Further action on tariff and non-tariff barriers would take place in the context of other multilateral trade arrangements, principally APEC's proposed Pacific Rim free-trade area, NAFTA and the enlarged European Union.

B. Trade-related environmental measures (TREMs)

88. The most perplexing side of the Uruguay Round, as regards wood and wood products, is the role, if any, of trade-related environmental measures (TREMs).

89. The WTO's functions are both analytical and prescriptive: to identify the relationship between trade measures and environmental measures in order to promote sustainable development, and to make appropriate recommendations on whether any modifications of the provisions of the multilateral trading system are required. However, two important constraints guide the WTO in its work in this area. One is that the WTO's competence for policy coordination in this area is limited to trade. The second is that, if problems of policy coordination to protect the environment and promote sustainable development are identified through its work, these problems are to be resolved in a way that upholds and safeguards the principles of the multilateral trading system.

90. Limiting the WTO's competence in policy coordination to trade raises the issue of how and where the environmental policy coordination will be carried out. Multilateral environmental agreements (MEAs), including decisions of international bodies such as the General Assembly of the United Nations, could take precedence or at least provide guidance for the WTO to modify the trade rules of the multilateral trading system. If international consensus is not reached elsewhere, then the WTO could be confronted with calls for modifications to allow or regulate unilateral use of TREMs that could have a strong impact on trade. There could be an urgent need for the WTO to respond in order not to be overtaken by outside events. The issue then arises as to how the WTO would

respond, given its commitment to uphold and safeguard the principles of the multilateral trading system. Modification of trade rules, through a waiver procedure or through amendment of the rules, would be a difficult and serious undertaking, as the calls for TREM go against an established trend towards trade liberalization, a trend which many in the trade community are reluctant to reverse and to which they have a deep philosophical commitment. On the other hand, the WTO may become an active and innovative institution in finding ways to resolve problems.

C. National-level action for developing countries

91. Much work could be done in evaluating the results of the Uruguay Round for individual developing countries that export wood and wood products, to ascertain where there are new market opportunities and incentives, as well as where increasing competition could harm them. Account would have to be taken of a whole host of factors that are part of the promotion of vertical diversification and of increasing exports of value-added products. This country-level work would proceed on a detailed basis and require considerable technical assistance.

92. Monitoring and considering action by individual developing countries or groups of them on TREM contemplated or imposed by importing countries could be a further area for activity.

93. Further work could be done on initiating a dialogue with developed countries on reduction in remaining tariffs and on improvements in the GSP and other preferential schemes.

ANNEX

WOOD AND WOOD PRODUCTS IN THE HARMONIZED SYSTEM

440110	24501	N/A	Fuel wood, in logs, in billets... or in similar forms
440121	24611	TNE	Coniferous wood in chips or particles
440122	24615	TNE	Non-coniferous wood in chips or particles
440130	24620	KGM	Sawdust, wood waste and scrap (incl. agglomerated)
440200	24502	TNE	Wood charcoal
440310	24730	MTR	Wood in the rough..., treated with paint, stains, creosote
440320	24740	N/A	Untreated coniferous wood in the rough...
440331	24751	MTQ	Dark Red Meranti, Light Red Meranti and Meranti Bakau wood
440332	24751	MTQ	White Lauan, White Meranti, White Seraya, Yellow Meranti and
440333	24751	MTQ	Keruing, Ramin, Kapur, Teak, Jongkong, Merbau, Jelutong and
440334	24751	MTQ	Okoume, Obeche, Sapeli, Sipo, Acajou d-Afrique, Makore and
440335	24751	MTQ	Tiama, Mansonia, Ilomba, Dibetou, Limba and Azobe wood
440391	24752	MTQ	Oak (Quercus spp.) wood in the rough, (excl. treated)
440392	24752	MTQ	Beech (Fagus spp.) wood in the rough, (excl. treated)
440399	24752	MTQ	Wood, nes in the rough..., (excl. treated)
440410	63491	N/A	Coniferous hoopwood; split poles, etc; wooden sticks, etc;
440420	63491	N/A	Non-coniferous hoopwood; split poles, etc; wooden sticks, etc
440500	63493	N/A	Wood wool; wood flour
440610	24811	NMB	Railway or tramway sleepers (cross-ties) of wood, not impregn
440690	24819	NMB	Railway or tramway sleepers (cross-ties) of wood, impregnated
440710	24820	MTQ	Coniferous wood sawn or chipped lengthwise, sliced or peeled,
440721	24840	MTQ	Specified tropical woods (Meranti, etc) sawn lengthwise...,
440722	24840	MTQ	Specified tropical woods (OKoume..., etc) sawn lengthwise...,
440723	24840	MTQ	Baboen, Mahogany, Imbuia and Balsa wood, sawn lengthwise...,
440791	24840	MTQ	Oak (Quercus spp.) wood,sawn/chipped lengthwise,sliced/peeled
440792	24840	MTQ	Beech (Fagus spp.) wood,sawn/chipped lengthwise,sliced/peeled
440799	24840	MTQ	Wood, nes sawn or chipped lengthwise, sliced or peeled, >6mm
440810	63411	MTK	Coniferous veneer sheets and sheets for plywood, etc, =<6mm
440820	63412	MTK	Specified tropical wood veneer sheets and for plywood, =<6mm
440890	63412	MTK	Veneer sheets and sheets for plywood and other wood, =<6mm th
440910	24830	N/A	Coniferous wood, continuously shaped along any of its edges
440920	24850	N/A	Non-coniferous wood, continuously shaped along any of its edg
441010	63422	MTQ	Particle board and similar board of wood, unworked
441090	63423	MTQ	Particle board and similar board of ligneous materials, unwor
441111	63451	KGM	Fibreboard of a density >0.8g/cm3, not worked or surface cove
441119	63451	KGM	Fibreboard of a density >0.8g/cm3, nes
441121	63452	KGM	Fibreboard of a density >0.5g/cm3 but =<0.8g/cm3, not worked.
441129	63452	KGM	Fibreboard of a density >0.5g/cm3 but =<0.8g/cm3, nes
441131	63453	KGM	Fibreboard of a density >0.35g/cm3 but =<0.5g/cm3, not worked
441139	63453	KGM	Fibreboard of a density >0.35g/cm3 but =<0.5g/cm3, nes
441191	63459	KGM	Fibreboard of a density =<0.35g/cm3, not worked or surface co
441199	63459	KGM	Fibreboard of a density =<0.35g/cm3, nes
441211	63431	MTQ	Plywood with >=1 outer ply of tropical wood, each ply =<6mm t
441212	63431	MTQ	Plywood with >=1 outer ply of non-coniferous wood, nes, each
441219	63439	MTQ	Plywood, each ply =<6mm thick, nes
441221	63441	N/A	Plywood... >6mm non-coniferous outer ply, with particle board
441229	63441	N/A	Plywood... >6mm non-coniferous outer ply, nes
441291	63449	N/A	Plywood... containing at least one layer of particle board,
441299	63449	N/A	Plywood, veneered panels and similar laminated wood, nes
441300	63421	N/A	Densified wood, in blocks, plates, strips or profile shapes
441400	63541	NMB	Wooden frames for paintings, photographs, mirrors or similar
441510	63511	N/A	Cases, boxes, crates, drums and similar packings of wood; cab
441520	63512	N/A	Pallets, box pallets and other load boards of wood
441600	63520	NMB	Casks, barrets, vats, tubs, etc, and parts thereof, of wood
441700	63591	N/A	Tools..., broom or brush bodies... of wood; boot or shoe tree
441810	63531	N/A	Windows, French-windows and their frames, of wood
441820	63532	NMB	Doors and their frames and thresholds, of wood
441830	63539	MTK	Parquet panels, of wood

441840 63539 N/A Shuttering for concrete constructional work, of wood
441850 63533 N/A Shingles and shakes, of wood
441890 63539 N/A Builders' joinery and carpentry, of wood, nes
441900 63542 N/A Tableware and kitchenware, of wood
442010 63549 N/A Statuettes and other ornaments, of wood
442090 63549 N/A Wood marquetry, inlaid wood; caskets... of wood
442110 63599 N/A Clothes hangers of wood
442190 93599 N/A Articles of wood, nes
470100 25120 KSD Mechanical wood pulp
470200 25130 KSD Chemical wood pulp, dissolving grades
470311 25141 KSD Unbleached coniferous chemical wood pulp, soda or sulphate
470319 25142 KSD Unbleached non-coniferous chemical wood pulp, soda or sulphat
470321 25151 KSD Semi-bleached or bleached coniferous chemical wood pulp, soda
470329 25152 KSD Semi- or bleached non-coniferous chemical wood pulp, soda...,
470411 25161 KSD Unbleached coniferous chemical wood pulp, sulphite, nes
470419 25161 KSD Unbleached non-coniferous chemical wood pulp, sulphite, nes
470421 25162 KSD Semi-bleached or bleached coniferous chemical wood pulp, sulp
470429 25162 KSD Semi- or bleached non-coniferous chemical wood pulp, sulphite
470500 25191 KSD Semi-chemical wood pulp
470710 25111 KGM Waste and scrap of unbleached kraft paper, paperboard, of ...
470720 25112 KGM Waste and scrap of other paper or paperboard of bleached chem
470730 25113 KGM Waste and scrap of paper or paperboard made mainly of mechani
470790 25119 KGM Waste and scrap of paper or paperboard, nes
480100 64110 TNE Newsprint, in rolls or sheets
480210 64121 KGM Hand-made paper and paperboard
480220 64122 TNE Paper and paperboard as a base for photo-sensitive... paper
480230 64123 TNE Carbonizing base paper, uncoated, in rolls or sheets
480240 64124 TNE Wallpaper base, uncoated, in rolls or sheets
480251 64125 TNE Paper... (excl. mechanical fibres), weighing <40g/m2
480252 64126 TNE Paper... (excl. mechanical fibres), weighing >=40g/m2 but =<1
480253 64127 TNE Paper... (excl. mechanical fibres), weighing >150g/m2
480260 64129 TNE Paper... (>10% of mechanical fibres), uncoated, in rolls or s
480300 64163 TNE Toilet... similar paper, in rolls or sheets
480411 64141 TNE Unbleached kraftliner, uncoated, in rolls or sheets
480421 64142 TNE Unbleached sack kraft paper, uncoated, in rolls or sheets
480429 64142 TNE Sack kraft paper (excl. unbleached), uncoated, in rolls or sh
480431 64146 TNE Unbleached kraft paper..., weighing =<150g/m2
480439 64146 TNE Kraft paper... (excl. unbleached), weighing =<150g/m2
480441 64147 TNE Unbleached kraft paper..., weighing >150g/m2 but <225g/m2
480442 64147 TNE Kraft paper..., weighing >150g/m2 but <225g/m2, bleached unif
480449 64147 TNE Kraft paper..., weighing >150g/m2 but <225g/m2, nes
480451 64148 TNE Unbleached kraft paper..., weighing >=225g/m2
480452 64148 TNE Kraft paper..., weighing >=225g/m2, bleached uniformally
480459 64148 TNE Kraft paper..., weighing >=225g/m2, nes
480510 64151 TNE Semi-chemical fluting paper (corrugated medium), in rolls or
480521 64154 TNE Multi-ply paper and paperboard with each layer bleached, in r
480522 64154 TNE Multi-ply paper... with only one outer layer bleached, in rol
480523 64154 TNE Multi-ply paper... two outer layers bleached, in rolls or she
480529 64154 TNE Multi-ply paper and paperboard, in rolls or sheets, nes
480530 64152 TNE Sulphite wrapping paper, in rolls or sheets
480540 64156 TNE Filter paper and paperboard, in rolls or sheets
480550 64156 TNE Felt paper and paperboard, in rolls or sheets
480560 64157 TNE Paper and paperboard, in rolls or sheets, weighing =<150g/m2,
480570 64158 TNE Paper..., in rolls or sheets, weighing >150g/m2 but <225/g/m2
480580 64159 TNE Paper and paperboard, in rolls or sheets, weighing >=225g/m2,
480620 64153 TNE Greaseproof papers, in rolls or sheets
480630 64153 TNE Tracing papers, in rolls or sheets
480640 64153 TNE Glassine and other glazed transparent or translucent papers,
480710 64191 TNE Composite paper..., laminated with bitumen, etc, in rolls or
480799 64192 TNE Composite paper and paperboard, in rolls or sheets, nes
480810 64164 TNE Corrugated paper and paperboard, in rolls or sheets
480820 64161 TNE Sack kraft paper, creped or crinkled, in rolls or sheets

480830 64162 TNE Kraft paper, creped or crinkled, (excl. sack), in rolls or sh
480890 64169 TNE Paper and paperboard, corrugated, creped, etc, in rolls or sh
480910 64131 TNE Carbon or similar copying papers, in rolls or sheets
480920 64131 TNE Self-copy paper, in rolls or sheets
480990 64131 TNE Copying or transfer papers, nes, in rolls or sheets
481011 64132 TNE Paper..., coated with kaolin, etc, weighing =<150g/m2
481012 64133 TNE Paper..., coated with kaolin, etc, weighing >150g/m2
481021 64134 TNE Light-weight coated paper for writing, etc, >10% mechanical f
481029 64134 TNE Paper... for writing, etc, >10% mechanical fibres, coated...
481031 64174 TNE Kraft paper..., bleached, >95% chemical fibres, =<150g/m2, co
481032 64175 TNE Kraft paper..., bleached, >95% chemical fibres, >150g/m2, coa
481039 64176 TNE Kraft paper and paperboard, coated..., nes
481091 64177 TNE Multi-ply paper and paperboard, coated...
481099 64177 TNE Paper and paperboard, coated with kaolin, etc, nes
481110 64173 TNE Tarred, bituminized or asphalted paper and paperboard
481121 64178 TNE Self-adhesive paper and paperboard
481129 64178 TNE Gummed paper and paperboard (excl. self-adhesive)
481131 64171 TNE Paper..., coated... with plastics, bleached and weighing >150
481139 64172 TNE Paper and paperboard coated... with plastics, nes
481140 64179 TNE Paper and paperboard coated... with wax, paraffin wax... oil
481190 64179 TNE Paper, paperboard, coated... surface-decorated or printed, ne
481200 64193 TNE Filter blocks, slabs and plates, of paper pulp
481310 64241 N/A Cigarette paper in the form of booklets or tubes
481320 64241 TNE Cigarette paper in rolls of a width =<5cm
481390 64155 TNE Cigarette paper, nes
481410 64194 KGM Ingrain paper
481420 64194 KGM Wallpaper, etc, of paper coated with a... layer of plastics
481430 64194 KGM Wallpaper, etc, consisting of paper covered with plaiting mat
481490 64194 KGM Wallpaper and other wall coverings; window transparencies of
481610 64242 KGM Carbon or similar copying papers
481620 64242 KGM Self-copy paper
481630 64242 N/A Duplicator stencils of paper
481690 64242 N/A Copying or transfer paper, nes; offset plates, of paper
481710 64221 N/A Envelopes of paper or paperboard
481720 64222 N/A Letter cards, plain postcards and correspondance cards of pap
481730 64223 N/A Boxes, etc, of paper or paperboard containing paper stationer
481810 64243 KGM Toilet paper
481820 64294 KGM Handkerchiefs and cleansing or facial tissues of paper...
481830 64294 KGM Tablecloths and serviettes of paper
481840 64295 N/A Sanitary towels and tampons, napkins and napkin liners for ba
481850 64294 N/A Articles of apparel and clothing of paper, cellulose wadding.
481890 64294 N/A Household, sanitary or hospital articles of paper..., etc, ne
481910 64211 N/A Cartons, boxes and cases, of corrugated paper or paperboard
481920 64212 KGM Folding cartons, boxes and cases, of non-corrugated paper or
481930 64213 MIL Sacks and bags, having a base of a width of >=40cm of paper,
481940 64214 MIL Sacks and bags, including cones of paper, paperboard, nes
481950 64215 N/A Packing containers, including record sleeves, of paper..., ne
481960 64216 N/A Box files, letter trays, storage boxes, etc, of paper
482010 64231 N/A Registers, account books, order and receipt books, of paper,
482020 64232 N/A Exercise-books
482030 64233 N/A Binders (other than book covers), folders and file covers
482040 64234 N/A Manifold business forms and interleaved carbon sets
482050 64235 N/A Albums for stamps or for collections of paper or paperboard
482090 64239 N/A Blotting pads, book covers and other articles of stationery
482110 89281 N/A Printed paper or paperboard labels of all kinds
482190 89281 N/A Paper or paperboard labels of all kinds (excl. printed)
482210 64291 N/A Bobbins, spools..., of paper or paperboard for winding textil
482290 64291 N/A Bobbins, spools, cops and similar supports of paper or paperb
482311 64244 N/A Self-adhesive paper, in strips or rolls
482319 64244 N/A Gummed or adhesive paper (excl. self-adhesive), in strips or
482320 64245 KGM Filter paper and paperboard, cut to shape
482330 64292 N/A Cards, not punched, for punch card machines

482340 64299 N/A Rolls, sheets and dials, printed for self-recording apparatus
482351 64248 KGM Printed, embossed or perforated paper or paperboard for writi
482359 64248 KGM Paper and paperboard writing, printing, etc, cut to shape, ne
482360 64293 N/A Trays, dishes, plates and cups, etc, of paper or paperboard
482370 64299 N/A Moulded or pressed articles of paper pulp
482390 64299 N/A Paper and paperboard, cut to size and articles of paper, etc,
490110 89215 N/A Printed books, brochures, leaflets, etc, in single sheets
490191 89216 N/A Dictionaries and encyclopaedias, and serial instalments there
490199 89219 N/A Printed books, brochures, leaflets and similar printed matter
490210 89221 N/A Newspapers, journals and periodicals, appearing >= four times
490290 89229 N/A Newspapers, journals and periodicals, appearing < four times
490300 89212 N/A Children's picture, drawing or colouring books
490400 89285 N/A Music, printed or in manuscript
490591 89213 N/A Maps and hydrographic or similar charts, in book form
490599 89214 N/A Maps and hydrographic or similar charts, printed, nes
490600 89282 N/A Plans... for architectural... purposes; handwitten texts; pho
490700 89283 N/A New stamps; stamp-impressed paper; banknotes; cheque forms,e
490810 89241 N/A Transfers (decalcomanias), vitrifiable
490890 89241 N/A Transfers (decalcomanias) (excl. vitrifiable)
490900 89242 N/A Printed or illustrated postcards; printed cards bearing greet
491000 89284 N/A Calendars of any kind, printed, including calendar blocks
491110 89286 N/A Trade advertising material, commercial catalogues and the lik
491191 89287 N/A Pictures, designs and photographs
491199 89289 N/A Other printed matter, nes
940130 82114 N/A Swivel seats and variable height adjustment oth than those of
940140 82115 N/A Seats excluding garden seats or camping equipment, convertibl
940161 82116 N/A Seats with wooden frames,upholstered nes
940169 82116 N/A Seats with wooden frames, nes
940171 82117 N/A Seats with mtl frames,upholstered nes,oth than those of headi
940179 82117 N/A Seats with metal frames, nes, other than those of heading No
940180 82118 N/A Seats nes, other than those of heading No 94.02
940190 82119 N/A Parts of seats other than those of heading No 94.02
940330 82151 N/A Office furniture, wooden, nes
940340 82153 N/A Kitchen furniture, wooden, nes
940350 82155 N/A Bedroom furniture, wooden, nes
940360 82159 N/A Furniture, wooden, nes
940390 82180 N/A Furniture parts nes→e furniture, wooden, nes
940340 82153 N/A Kitchen furniture, wooden, nes
940350 82155 N/A Bedroom furniture, wooden, nes
940360 82159 N/A Furniture, wooden, nes
940390 82180 N/A Furniture parts nes

REFERENCES

- FAO, *Yearbook of forest products*, 1992.

- FAO, *Yearbook of forest products*, 1993.

- GATT, "The results of the Uruguay Round of Multilateral Trade Negotiations, Market access for goods and services: Overview of the results", November 1994.

- GATT, "The Uruguay Round deal", April 1994.

- Ghazali, B.H., and M. Simula, "Certification schemes for all timber and timber products", study prepared for the International Tropical Timber Organization, April 1994.

- London Environmental Economics Centre, "The economic linkages between the international trade in tropical timber and the sustainable management of tropical forests", main report to the International Tropical Timber Organization, 19 March 1993.

- London Environmental Economics Centre, "Technical annexes to the main report" (cited above), March 1993, Annex A: "Tropical forest resources and international trade in tropical timber products", by J.C. Burgess, and Annex C: "Market conditions for tropical timber products", by D.J. Brooks.

NOTES

1. GATT, "Tropical products: Information on the commercial policy situation and trade flows, Tropical wood and wood products," Com.TD/W/345, 6 November 1981, p. 31.

2. Bourke, I.J., "Trade in forest products: a study of the barriers faced by the developing countries," FAO Forestry Paper 83, FAO, 1988.

3. GATT, op. cit., p.17.

4. Bourke, op. cit.

5. United Nations Conference on Environment and Development, *Report of the United Nations Conference on Environment and Development*, A/CONF.151/26 (Vol. III), 14 August 1992, pp. 111-116.

6. Barbier, E.B., "Assessment of the effects of the Uruguay Round Agreement on the international trade in forest products", FAO, 1995, in press.

7. GATT, "The results of the Uruguay Round of multilateral trade negotiations, Market access for goods and services: Overview of the results," November 1994, pp. 27-38.

8. Ghazali, B.H. and M. Simula, *Certification schemes for all timber and timber products*, study prepared for the International Tropical Timber Organization, April 1994, p. 32.